

**SAMSUNG**

# CDMA TELEPHONE SCH-i830

# ***SERVICE*** *Manual*

## CDMA TELEPHONE

## CONTENTS



1. General Introduction
2. Circuit Description
3. Installation
4. NAM Programming
5. Product Support Tools
6. Test Procedure
7. Flow Chart of Troubleshooting
8. Exploded View/  
Disassembly and Assembly Instructions
9. Block Diagram
10. Electrical Parts List
11. PCB Diagrams

**SAMSUNG  
ELECTRONICS**



---

# 1. General Introduction

---

## 1-1 General Instruction

The SCH-i830 enable mobile users to communicate 3G CDMA2000 1X, 1X EVDO 2G GSM service into a single handset.

For CDMA/PCS mode, The SCH-i830 supports Release A of the CDMA2000 1X standard, offering data rates of up to 307 kilobits per second (kbps) on both the forward and reverse links, along with simultaneous voice and data services.

For The GSM/DCS/GPRS mode, The SCH-i830 supports voice service, data service and SMS in EGSM900 and DCS1800.

So, The SCH-i830 may be the first PDA phone in the world that works on North American CDMA networks and also GSM networks overseas. This stylish bar phone also supports a VGA color displays, Bluetooth, SMS, Email, voice dialing, and airplane mode.



---

## 2. Circuit Description

---

### 2-1. Logic Section

#### 2-1-1. Power Supply

For the POWER ON, the PHONE\_ON pulse signal for 1 second from PDA turns on U900(PM6650). The pin 29, 33, 35, 41, 52, 54, 65, 71, 83 of U900(PM6650) are the inputs of all regulators on the phone. Simultaneously, MSM sends out PS\_HOLD(logical HIGH) to turn on the pin 57 of U900(PM6650) even after the PHONE\_ON signal is released. For the POWER OFF, by pressing POWER KEY of the phone application, the MSM output LOW on the PS\_HOLD.

The regulated voltage(U900,VREG\_MSMC, VRGE\_MSME, VREG\_MSMP ) is used in the digital part of MSM.

The regulated voltage(U900,VREG\_MSMA) is used in the analog part of MSM.

The regulated voltage(U900, VREG\_RFTX) is used in the TX RF.

The regulated voltage(U900,VREG\_RFRX) is used in the Rx RF part.

The regulated voltage(U900,VREG\_TCXO) is used in the TCXO.

The regulated Voltage(U900,VREG\_SYNTX) is used in the PLL part.

#### 2-1-2. Logic Part

The logic part consists of internal CPU of MSM, Memory.

#### **MOBILE SYSTEM MODEM(UCP800:MSM6500)**

Industry standard ARM926EJ-S microprocessor is embedded. The MSM6500 chipset integrates CDMA2000 1x and 1xEVDO service. The 1xEVDO solution can support High-speed peak data rates of 2.4Mbps on forward link and 153kbps on reverse link.

The MSM6500 device is offered in a 409 ball, 0.5mm pitch, CSP production package. Subsystems within the MSM6500 device include a CDMA processor, a QDSP for voice compression, an ARM9TDMI microprocessor. Also integrated in the MSM6500 device are analog functions such as an audio voice codec, PLL, transmit DACs, ADCs, memories, USB controller, peripheral interfaces, and an enhanced clock. It is one of the most important components of the CDMA cellular phone.

The interface circuitry consists of reset circuit, dual address/data bus and memory controls. The TCXO clock of 19.2Mhz is used as the clock of SCH-i830 model.

#### **MCP : FLASH ROM and SDRAM (UME802:K5D5657DCM)**

MCP consists of 256Mbit NAND FLASH and 256Mbit SDRAM. MCP is used to store the cellular phone's executable program, necessary data files and temporary data space and efs area is used to store ESN, NAM information, telephone directory, SMS messages and other important information of the phone. MCP is also used to execute the DMSS(Dual Mode Subscriber system) software.

### **Clock**

- CPU clock : 19.2MHz. This clock signal from the TCXO
- Sleep clock : 32.768KHz. This clock signal is used for sleep.
- TCXO/N : 19.2/N MHz. This clock source is used by various blocks of the MSM6500 device, such as the ARM9CORE, UARTs, general-purpose PDMs and TCXO is also used by the MSM6500 device to produce CHIPX8.
- USB clock : 48MHz. This clock signal is used to drive the USB interface

## **2-1-3. RF Interface Part**

### **CDMA Data Interface**

- TX\_Q\_P, TX\_Q\_N, TX\_I\_P, TX\_I\_N (UCP800) : Tx analog signal used during CDMA
- RX\_I\_P, RX\_Q\_P, RX\_I\_N, RX\_Q\_N (UCP800): RX analog signal used during CDMA

### **RF Interface**

- TX : TX\_AGC\_ADJ(UCP100) is used to control the TX power,  
PA\_ON\_PCS(UCP100) is used to control the PCS power amplifier and  
PA\_ON\_CELL(UCP100) is used to control the CDMA power amplifier.
- RX : TRK\_LO\_ADJ(UCP100) is used to compensate the TCXO module.

## **2-1-4. Audio Part**

The MSM6500 integrates an audio voiceband Codec into Mobile Station Modem. The integrated Codec contains all of the required conversion and amplification stages for the audio front end.

The Codec operates as a 13bit linear Codec with the transmit(TX) and receive(RX) filters designed to meet ITU-TG.712 requirement. The CODEC contains the software controller amplifier for both the receiving and transmitting sections. Also, the vocoding schemes used will be 13kbps QCELP and 8Kbps EVRC. The QCELP vocoder is based in the MSM internally.

### **Tx Audio Path**

The voice signal from the microphone is inputted to the internal CODEC. The voice signal is then amplified by the internal amplifier and is converted to PCM data to be outputted to the MSM as 13bit data. This data is then processed by the MSM(UCP800)'s internal.

## Rx Audio Path

The PCM data from the MSM(UCP800)'s internal is inputted to the internal CODEC and the data will be decoded by the internal DAC and audio levels are adjusted by the amplifier. The final audio is then sent to the audio receiver.

## 2-2. PCS Section

### 2-2-1. Receiver

#### **LOW NOISE AMPLIFIER (U1000)**

The low noise amplifier(It is included in FC7510:U1000) amplifies a weak signal received from the base station to obtain the optimum signal level.

#### **RF BAND PASS FILTER (F1001)**

The RF BPF(F1001) passes only a specific frequency( $1960 \pm 30$  MHz) from the signal received from the mobile station. The bandwidth is 60 MHz.

#### **VOLTAGE CONTROLLED OSCILLATOR(VCO1000)**

The VCO(VCO1000) generates the signal having center frequency 1715 ~ 1788MHz frequency range with the voltage control. The PLL in RTR6300(U1102) controls this signal.

#### **Frequency Synthesizer Circuit**

The PLL(Phased Locked Loop) block consists of VC-TCXO(TCX1001), PLL in RTR6300 and VCO(VCO1000). Input reference frequency is generated at VC-TCXO(TCX1001) and the RF local signal is generated at VCO. PLL compares the two signals and generates the desired signal with a preprogrammed counter which controls voltage.

#### **VOLTAGE CONTROLLED TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR (TCX1001)**

The VC-TCXO (TCX1001) is a reference source of the frequency synthesizer. It provides 19.2MHz reference frequency to PLL-IC. It is a voltage controlled temperature compensated crystal oscillator having 19.2MHz  $\pm 2.5$ ppm frequency stability over all useful temperature range.

A correct frequency tuning is made by the control voltage.

I

## 2-2-2. Transmitter

### **Antenna(ANT1)**

Antenna(ANT1) sends signal to the base station and receives the signal from the base station. It is a multi-band Antenna and covers PCS band, CDMA band DCS band, GSM Tx band and GPS band.

### **RF Switch(U1201)**

It(U1201) is used to switch the PCS path, the CDMA path the GPS path and the GSM path, The RF signal pass through PCS path when PCS\_SW is high.

PCS\_SW, CDMA\_SW, GPS\_SW and GSM\_SW are digital signals from MSM6500 via Decoder(U1200).

### **Duplexer(F1103)**

Duplexer(F1103) allows to transmit only the signals within acceptable Tx frequency range ( $1880 \pm 30$  MHz) through the antenna.

### **Power Amp(PAM1103)**

Power amplifier module(PAM1103:CX77107) amplifies signals to be sent to the base station through the antenna.

### **RF Band Pass Filter(Tx RF SAW Filter)**

The RF BPF(F1101) pass only specific frequency( $1880 \pm 30$  MHz) to send it to power amp(PAM1103:CX77107).

### **Direct Conversion Transmitter(U1102)**

The Direct Conversion Transmitter(U1102: RTR6300) allows the signal to be inputted to the power amp(PAM1103) as a specified level from I, Q base band signals.

### **Automatic Gain Control Amp**

The TX AGC amp (in RTR6300) controls gain of AGC to deliver power level needed at driver amp. Its control voltage varies from 0.2V to 2.5V.



## 2-3. CDMA Section

### 2-3-1. Receiver

#### **Low Noise Amplifier(U1000)**

The low noise amplifier(It is included FC7510: U1000) amplifies a weak signal received from the base station to obtain the optimum signal level.

#### **RF Band Pass Filter(F1000)**

The RF BPF(F1000) passes only a specific frequency( $881.49 \pm 12.5$  MHz) from the signal received from the mobile station. The bandwidth is 25 MHz.

#### **Voltage Controlled Oscillator(VCO1000)**

The VCO(VCO1000) generates the signal having center frequency 1715 ~ 1788MHz frequency range with the voltage control. The PLL in RTR6300 controls this signal.

#### **Frequency Synthesizer Circuit**

The PLL(Phased Locked Loop) block consists of VC-TCXO(TCX1001), PLL in RTR6300 and VCO(VCO1000). Input reference frequency is generated at VC-TCXO(TCX1001) and the RF local signal is generated at VCO. PLL compares the two signals and generates the desired signal with a preprogrammed counter which controls voltage.

#### **VC-TCXO(TCX1001)**

The VC-TCXO (TCX1001) is a reference source of the frequency synthesizer. It provides 19.2MHz reference frequency to PLL-IC. It is a voltage controlled temperature compensated crystal oscillator having 19.2MHz  $\pm 2.5$ ppm frequency stability over all useful temperature range. A correct frequency tuning is made by the control voltage.

## 2-3-2. Transmitter

### **Antenna(ANT1)**

Antenna(ANT1) sends signal to the base station and receives the signal from the base station. It is a multi-band Antenna and covers PCS band, CDMA band DCS band, GSM Tx band and GPS band.

### **RF Switch(U1201)**

It(U1201) is used to switch the PCS path, the CDMA path the GPS path and the GSM path, The RF signal pass through PCS path when PCS\_SW is high.

PCS\_SW, CDMA\_SW, GPS\_SW and GSM\_SW are digital signals from MSM6500 via Decoder(U1200).

### **Duplexer(DUF1107)**

Duplexer(DUF1107) allows Rx frequency range( $881.49 \pm 12.5$  MHz) and Tx frequency range ( $836.49 \pm 12.5$  MHz) from the antenna to pass through LNA. It also matches LNA input in receiving part and PAM(PAM1104:CX77105) output in transmitter part with the antenna.

### **Power Amp(PAM1104)**

Power amplifier module(PAM1104:CX77105) amplifies signal to be sent to the base station through the antenna.

### **RF Band Pass Filter(Tx RF SAW Filter)**

The RF BPF(F901) pass only specific frequency( $836.49 \pm 12.5$  MHz) to send it to power amp(U903:CX77105).

### **Direct Conversion Transmitter(U1102)**

The Direct Conversion Transmitter(U1102: RTR6300) allows the signal to be inputted to the power amp(PAM1103) as a specified level from I, Q base band signals.

### **Automatic Gain Control Amp**

The TX AGC amp in RTR6300 controls gain of AGC to deliver power level to be needed at Driver amp. Its control voltage varies from 0.2V to 2.5V.

## 2-4. GSM/DCS Section

### 2-4-1. Receiver

#### **Low Noise Amplifier(U1102)**

The low noise amplifier(It is included in RTR6300 : U1102) amplifies a weak signal received from the base station to obtain the optimum signal level.

#### **Voltage Controlled Oscillator(VCO1000)**

The VCO(VCO1000) generates the signal having center frequency 1715 ~ 1788MHz frequency range with the voltage control. The PLL in RFR6000 controls this signal.

#### **Frequency Synthesizer Circuit**

The PLL(Phased Locked Loop) block consists of VC-TCXO(TCX1001), PLL in RFR6000 and VCO(VCO1000). Input reference frequency is generated at VC-TCXO(TCX1001) and the RF local signal is generated at VCO. PLL compares the two signals and generates the desired signal with a preprogrammed counter which controls voltage.

#### **VC-TCXO(TCX1001)**

The VC-TCXO (TCX1001) is a reference source of the frequency synthesizer. It provides 19.2MHz reference frequency to PLL-IC. It is a voltage controlled temperature compensated crystal oscillator having 19.2MHz  $\pm 2.5$ ppm frequency stability over all useful temperature range. A correct frequency tuning is made by the control voltage.

## 2-4-2. Transmitter

### **Antenna(ANT1)**

Antenna(ANT1) sends signal to the base station and receives the signal from the base station. It covers GSM TX band, CDMA RTX band, GPS band, DCS RTX band.

### **RF Switch(U1201)**

It(U902) is used to switch the PCS path, the CDMA path GSM/DCS path and the GPS path, The RF signal pass through CDMA path when CELL\_MODE is high. PCS\_MODE, CELL\_MODE and GPS\_MODE are digital signals from MSM6500 GPIO.

### **ASM(DUF1200)**

Antenna Switch Module(DUF1200) allows Rx frequency range( $881.49 \pm 12.5$  MHz) to come to the RX path and also allows Tx frequency range to go out to antenna by switching between RX block and TX block..

### **Power Amp(PAM1101)**

Power amplifier module(PAM1101) amplifies signal to be sent to the base station through the antenna.

### **Up-Converter(VCO1101)**

The up-converter(VCO1101) generate Tx RF signal by receiving the tune voltage that correspond proper frequency.

## 2-5. GPS Section

### **Antenna**

Antenna receives signal from GPS satellites.

It is a tri-band Antenna and covers GSM band, PCS band, CDMA band and GPS band.

### **RF Switch(U1201)**

It(U1201:NJG1519KC1) is used to switch the GSM Path, PCS path, CDMA path and the GPS path. The RF signal pass through PCS path when PCS\_SW is high. The RF signal pass through CDMA path when CDMA\_SW is high. The RF signal pass through GPS path when GPS\_SW is high. The RF signal pass through GSM path when GSM\_SW is high. GSM\_SW, PCS\_SW, CDMA\_SW and GPS\_SW are digital signals from MSM6500 GPIO.

### **RF Band Pass Filter(F1002)**

The RF BPF(F1002) passes only a specific frequency( $1575.42 \pm 2$  MHz) from the signal received from the satellites. The bandwidth is 2 MHz.

### **Low Noise Amplifier(TR1001)**

The low noise amplifier(TR1001) amplifies a weak signal received from the satellites to obtain the optimum signal level.

### **Low Noise Amplifier(U1001)**

The low noise amplifier(It is included in RFR6000 : U1001) amplifies a weak signal received from the satellites to obtain the optimum signal level.

## 2-6. PDA PART

The PDA logic part consists of power supply part, MPU & memory part, LCD part, audio part and all the peripherals.

### 2-6-1. POWER SUPPLY

When the battery is inserted to the handset,

VBAT makes VCC\_BATT, VCORE14, VPLL13, VSRAM11 via U405(MAX1587) which is a CPU voltage  
VCC30 via U405(MAX1587) which is CPU & peripheral voltage,  
VCC28 via U414(MIC5219-2.8BML) which is a DPRAM voltage,  
VLCD33 via U413(MIC2211-SSBML) which is a LCD logic voltage,  
VBT30 via U416(MIC2211-PPBML) which is a Buletooth voltage.  
VBAIS30 via U416(MIC2211-PPBML) which is a MIC vias voltage.  
VBAT33 via U413MIC2211-SSBML) which is a backup battery charging voltage,  
VSD30 via U410(MIC2212) which is a SD-Card voltage.

VCC30 makes VCC18 via U412(MIC2211-JGBML) which is a M-DOC voltage,

VDD30 makes VDD18 via U411(MIC2211-JGBML) which is a SDRAM voltage,

VLCD33 makes AVDD5V, VON, VOFF via U1000(MAX1779) which is LCD pannel voltage.

### Backup Battery

The SPH-i830 has a back-up battery(ML1220) that stores data of SDRAM when the battery removed or becomes low battery state that is below 3.1V.

The low battery state is checked by voltage detector or R3111Q311C(U400).

If the battery level is below 3.1V, nPOWER\_FAIL signal is asserted. Then the backup DC/DC converter(U405, MAX1676) output path is connected to VDD30 which is MPU, SDRAM voltage.

Backup battery supply main voltage or VDD30. If backup battery voltage is below 2V, discharging path is disabled.

## 2-6-2. MPU & Memory part

### **MCP(UCP201:LVPXA272FC5520)**

ARM Architecture

Built in Memory Controller, LCD Controller, AC97 Controller and MMC Controller

Intel® PXA272 processor with 64 Mbytes of Intel StrataFlash® memory

Flash memory is used to store the PDA executable program and necessary data files.

Clock and Power Controllers

It has a variety of different system peripherals and controls all the peripheral circuitry.

13x13mm VFBGA package

### **NAND FLASH Memory(UME301:MD4832D512)**

High capacity: single die - 512Mbit (64MB)

Nand Flash memory is used to user data files.

### **SDRAM Memory(UME305:K4S51323PF)**

Samsung CMOS technology

64MByte capacity Mobile Synchronous Dynamic RAM.

It is used as a application program execution space, temporary data space to store the internal flag information, timer data, and user data files.

### **DPRAM Memory(UME300:IDT70P248L55)**

4Kx16bit dual port RAM

It is accessed by Phone and PDA, but not accessed simultaneously.

Generally, Instructions and data used by Phone and PDA are stored.

## 2-6-3. LCD part

PXA272 has a LCD controller.

### **LCD module**

a transfective type color active matrix TFT

It is composed of a TFT LCD module(TFT LCD panel, driver ICs), a Backlight unit and a touch screen panel.

The resolution of 2.8inch contains 240x320 pixels and can display 65K colors.

## 2-6-4. Audio part

PDA plays audio files via WM9712 and the voice of the phone is connected to the WM9712.  
WM9712(U400)

The WM9712 is a high quality stereo codec with an integrated touch screen controller.  
Interfaced to PXA272 via AC'97 protocol.

- AC'97 Rev 2.2 specification
- headphone outputs
- a complete 4-wire touch screen controller

## 2-6-5. Wireless Part

### — Bluetooth

#### **Antenna**

Antenna receives signal from AP(Access Point) or other devices.  
It is a ISM(industrial, Scientific, Medical frequencies) Band Antenna that covers only 2.4 GHz.

#### **Module**

The Bluetooth Module which uses CSR's BC02-Audio is manufactured by SEMCO. It only supports 802.15 Specification(Bluetooth Specification 1.1) and communicates with CPU through UART Interface. The data throughput is up to 1 Mbps in the abstractly but typically supports 723 / 57.6 Kbps in an asynchronous mode and 432.6 kbps in a synchronous mode.  
Modulation method is FHSS(Frequency hopping spread spectrum) and it hops 1600 times a second. Its channel spacing is 1MHz and bandwidth is 1MHz.



## 2-6-6. All the Peripherals

### **Memory card**

The MultiMediaCard Controller on the Intel PXA272 can communicate with either:

- a MultiMediaCard (MMC)
- a Secure Digital (SD) Memory Card
- a Secure Digital I/O (SDIO) Card

### **IrDA(U200:HSDL-3003)**

IrDA Data Compliant 115.2kbit/s with Remote Control Transmission Infrared Transceiver.

a small form factor single enhanced infrared transceiver module that provides the combination of interface between logic and IR signals for through-air, serial, half-duplex IR data link, and IR remote control transmission operating at 940nm for universal remote control applications.

### **USB**

There is a USB Client in the Phone part and PDA part each.

The USB signals are switched to the interface connector via MUX(U604, MAX4636).

The USB interface of the Phone part is used for downloading and data service.

The USB of the PDA part is used for downloading user files and application programs by Active Sync to PC.

### **UART**

There is a UART port in the Phone part and PDA part each.

The UART signals are switched to the via the MUX(U601, MAX4684).

### **KEYPAD**

For user interface, a keypad is used for function. For key recognition, a key matrix is set up using signals KBC\_(0)~(6) and KBR\_(0)~(7) of the PXA272.



---

## 3. Installation

---

### 3-1. Installing and Removing the Battery

#### To install

1. Place the battery on the back of the phone, making sure the plastic tabs are aligned with the corresponding holes in the phone
2. Gently push the battery up until it snaps into place

#### To remove

Push the battery release latch, then slide the battery toward the bottom end of the phone

### 3-2. Using the Desktop Charger

1. Plug the AC cord from the charger into the electrical outlet.
2. Insert the phone into the slot.

- ◇ A red light on the charger lets you know the battery is charging.
- ◇ A green light lets you know that the battery is at least 90 percent charged.
- ◇ A orange light indicates that the battery is operating at a temperature that is too high or low, or that the charger is not plugged in correctly. Please check the charger and the battery.

#### Specifications using DTC (Desktop Charger)

| Battery Type | Standard Battery<br>(Li-ion, 1100mAh) | Extended Battery<br>(Li-ion, 1700mAh) |
|--------------|---------------------------------------|---------------------------------------|
| Charging     | < 5 hours                             | < 5 hours                             |
| SEC Code     | GH43-02529A                           | GH43-02518A                           |



---

## 4. NAM Programming

---

### 4.1 Programming of MDN and MSID

MDN and MSID can be programmed as follows:

Notes:

Press ##MSL#(ex: ##222222#) to enter Service Menu.

- 1) To view press View or to edit press Edit.
- 2) While editing, press OK to save. When OK is pressed after editing MDN, MSID will change to all 0's. Need to input a valid MSID and press OK to save the changes.
- 3) Press Done to save and exit programming

MDN and MSID Setting Flow:

| LCD Display  | change           | Function   |
|--------------|------------------|--|
| Service Menu |                  |  |
| Phone Number | Enter the number | This screen allows you to view and modify the phone number(MDN).             |
| MSID         | Enter the number | This screen allows you to view and modify the Mobile Station ID Number(MIN). |

### 4.2 Programming of the NAM parameters (Advanced)

NAM parameters can be programmed as follows:

Notes:

Press ##3282#. Select 'Advanced' button.

- 1) Screen will prompt for entering SVC code.
- 2) Enter the 6-digit MSL(ex: 222222) and then press OK.
- 3) To view press Advanced View or to edit press Advanced Edit.
- 4) Choose up/down to choose and press OK to save.
- 5) Some parameters press left/right key to change value.
- 6) Press Done to save and exit programming

**NAM SETTING FLOW:**

| <b>LCD Display</b>   | <b>change</b>   | <b>Function</b>  |
|----------------------|---|--|
| Service Menu         |   |  |
| Home SID (4139)      | Enter the number  | This screen allows you to view and modify the home system ID (SID).        |
| Home NID (65535)     | Enter the number  | This screen allows you to view and modify the home Network ID (NID).       |
| MCC (310)            | Enter the number  | The MCC screen allows you to view and modify the mobile country code.      |
| MNC (00)             | Enter the number  | The MNC screen allows you to view and modify the mobile network code.      |
| ACCOLC               | Enter the number  | The ACCOLC screen allows you to view and modify the access overload class. |
| CDMA Home Reg (YES)  | Toggle Yes or No by press ← → and select by press enter key | Home SID Registration.   |
| CDMA fSID Reg (YES)  | Toggle Yes or No by press ← → and select by press enter key | Foreign SID Registration.  |
| CDMA fNID Reg (YES)  | Toggle Yes or No by press ← → and select by press enter key | Foreign NID Registration.  |
| ESN (Hexa Number)    | Cannot change   | Electronic Serial Number of the phone is displayed.                        |
| P_REV (6)            | Cannot change   | Protocol Revision of the phone is displayed.                               |
| VOCODER (EVRC)       | Toggle the item by press ← → and select by press enter key  | Select vocoder option between EVRC and 13K Vocoder.                        |
| SCM (00101010)       | Cannot change   | Station Class Mark of the phone is displayed.                              |
| Lock Code            | Enter the number  | This screen allows you to view and modify the lock code.                   |
| SLOT MODE (YES)      | Toggle Yes or No by press ← → and select by press enter key | This screen allows you to view and modify the slotted mode.                |
| SLOT CYCLE INDEX (2) | Enter the number  | This screen allows you to view and modify the slot cycle index.            |

---

## 5. Product Support Tools

---

### 5-1. General

#### **IMPORTANT INFORMATION**

##### **Purpose**

The Product Support Tool (PST) offers you the ability to interface with the SAMSUNG mobile phone using a PC. With this tool you can program the phones network system requirements and functionality, data, and download software upgrades. This document supports UniPST(Universal Product Support Tool).

##### **EQUIPMENT REQUIRED**

Make sure you have the following equipment setup:

1. Minimum PC configuration: 586 CPU, 64MB RAM, Windows2000/XP and above, 5MB of disk space free for software upgrade.
2. PST Software with appropriate cable (USB Cable for SAMSUNG mobile phone).
3. USB Port.
4. Power Supply (4.3 V) or Battery.

##### **INSTALLATION**

1. Insert the SCH-i830 CDROM into your CD-Rom drive.
2. Run the file explorer and run the Setup.exe file.
3. After UniPST is installed on a computer, connect the phone, cable, and PC .

## 5-2. PST (Product Support Tool)

### 5-2-1. Getting Started

#### MAIN MENU SCREEN

1. Double Click on your "UniPst" on UniPst-Sprint folder.
2. Select SCH-i830

The Main Menu Screen shows the basic tasks that are available.

**CAUTION: DO NOT attempt to program phone with a low battery.**

#### PST SETUP

UniPst supports SAMSUNG Mobile phone. You can select virtual USB port.

### 5-2-2. Operation Procedure

#### **Service Programming**

Before start service programming, you must change phone mode of SCH-i830

The Service Programming screens enable you to set and change the service activation parameters of the phones.

#### **Read Data from File**

Click "Open mmc" icon to select the name of a file whose extension is "mmc". The values will be read from the named file, and will initialize the parameter values seen on the Service programming screen

#### **Read Data from Phone**

Click Read from the Phone icon to upload the current programmable parameters of the phone. The values are read from the phone, so the phone must have the power ON and be properly connected to the PST.

**NOTE: To actually view the data you need to go to the Edit Items screens.**

#### **Edit Items**

Click this icon to edit Number Assignment Module (NAM) items or UI items.

1. General : Slot Cycle Index, Service Code
2. NAM1

#### **Save Data to File**

Click this icon to save the current parameters to a file. Once you enter a filename, Click <OK> button to write all current parameters to that file. This way the same information can be downloaded into multiple phones.



## Write to Phone

Click this icon to write the selected parameter values to the phone. Writing the selected values to the phone may take up to a minute. If there are dependencies in a field you can make all the changes in the proper fields and download the information all together.

If you intend to use this write to Phone? feature, it is recommended that you do a "Read Data from Phone" first, and then make the changes, so that nothing gets inadvertently overwritten.

**NOTE: DO NOT TOUCH THE PHONE WHILE WRITING IS IN PROGRESS.**

## Software Download

### – Performing Software Upgrade

- HW version : 1.2
- SW version : ZH21 or later
- Please use SamsungPST FW Setup1.0.002\_MSI 2ndEdition and PSTI830.dll ( Universal PST For Sprint 1.723 - [SCH-i830] or higher)

When the user downloads the S/W on the SCH-i830 device the user may use external power removing battery from the device or a fully charged battery.

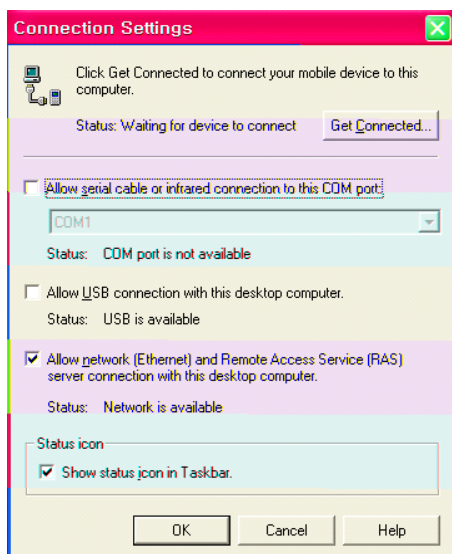
Install USB drivers (use MCCI USB driver version 4.16)

For data call test and downloading new s/w,

install two setup programs which located in the / USB\_Driver directory.

A. SAMSUNG USB Modem driver\_V4.16.zip (Phone USB)

B. MSASYNC.EXE (Active sync 4.1, it also install PDA USB driver)



**FIG 1. Active sync connection setting**

From fig 1. Showing above is the correct configuration of active sync for data call and downloading.

When the user downloads the s/w on the i830 device the user may use travel charger, fully charged battery or JIG ( refer to 15) connections.

**IMPORTANT :**

Please proceed following steps prior to

- i Download the PRL and ERI
- ii Read/Write the settings
- iii Download software (.img)

1. Start -> Settings -> Choose "System tab" -> Data Connection
2. Choose "As the modem through USB". Press "ok": USB path will be changed to phone.
3. Now the hand set is ready to download, please follow the steps below.
  - A. Make sure that USB DATA cable plugged into the user PC properly.
  - B. Run the "UniPst" and select SCH-i830. Press **"RUN"**.
  - C. Choose "Download Mode" which is below main menu.
  - D. Go to "Setup" > "COMM Setting". Make sure that correct COM port is selected.
  - E. Go to "File" > "Open Bin" to locate image file (For example, i830WM5.1.2S.ZH21.img) to download.
  - D. Click "Phone + PDA" icon to download both phone and PDA images.  
*(If the user need to download "PHONE ONLY" or "PDA ONLY" the user must pick the re-set hole for more than 3 seconds.)*
  - E. Select "OK" in next below message  
"Is Current CDMA USB Modem Port X ?"
  - F. Select "OK" again, and then do hard reset the phone as described in the dialog window.
  - G. After downloading is complete, please verify handset.  
Press Start Menu and go to "Start" > "Settings" > "System" tab > "Phone Info" to make sure that appropriate PDA and phone versions are shown.

**Trouble shooting for the following message:**

**Ø "Error in changing USB DM"**

1. TEST MODE ( 6 5 4 8 # 0 \* 4 5 6 8 0 )
2. Press 001
3. Press 100
4. Change Port map to **U1\_HFK USB\_DS** by using up, down arrow
5. Press enter
6. Press 002
7. Change USB path "as the modem through USB" by (Start -> Settings -> Choose "System tab" -> Data Connection)

---

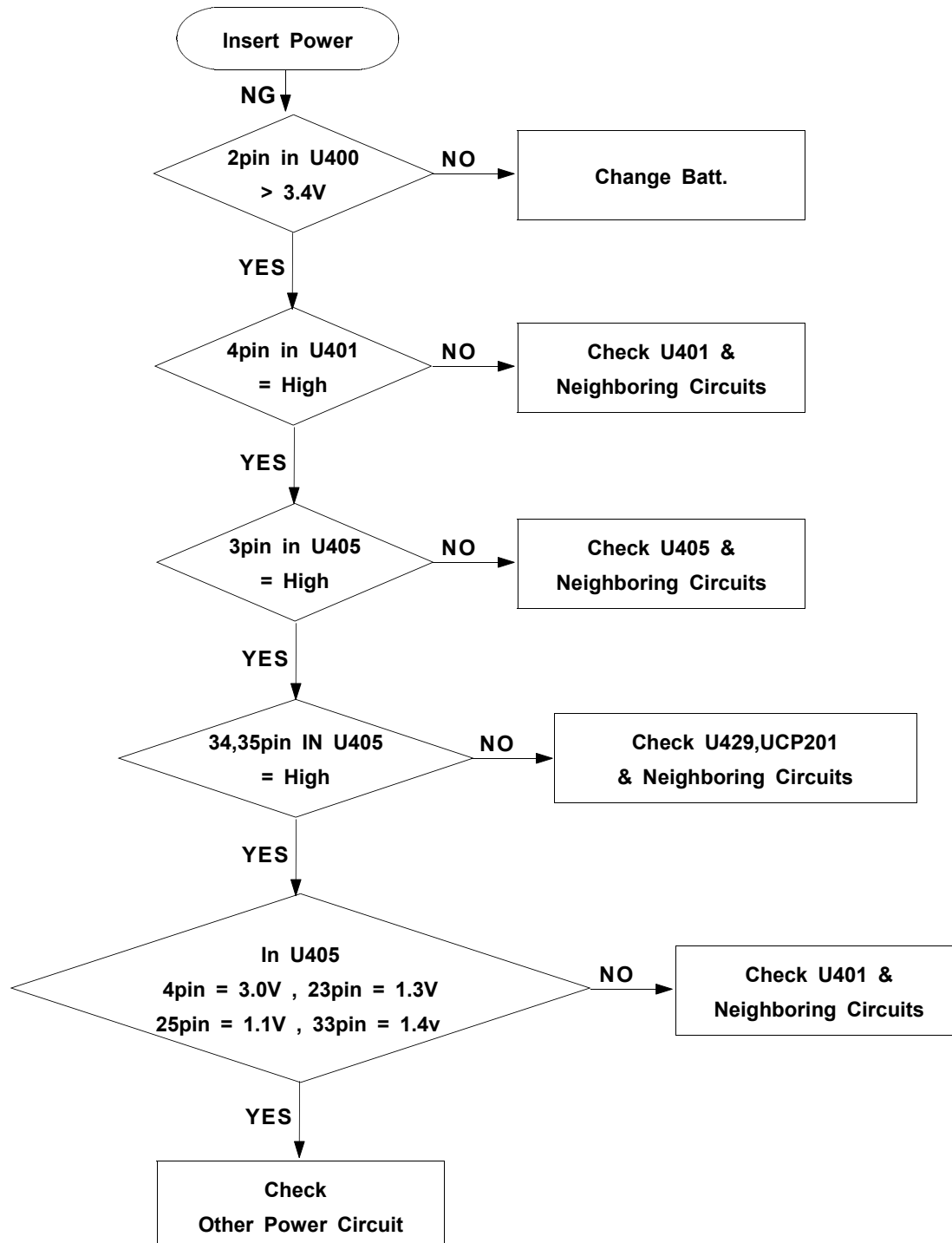
## 7. Flow Chart of TroubleShooting

---

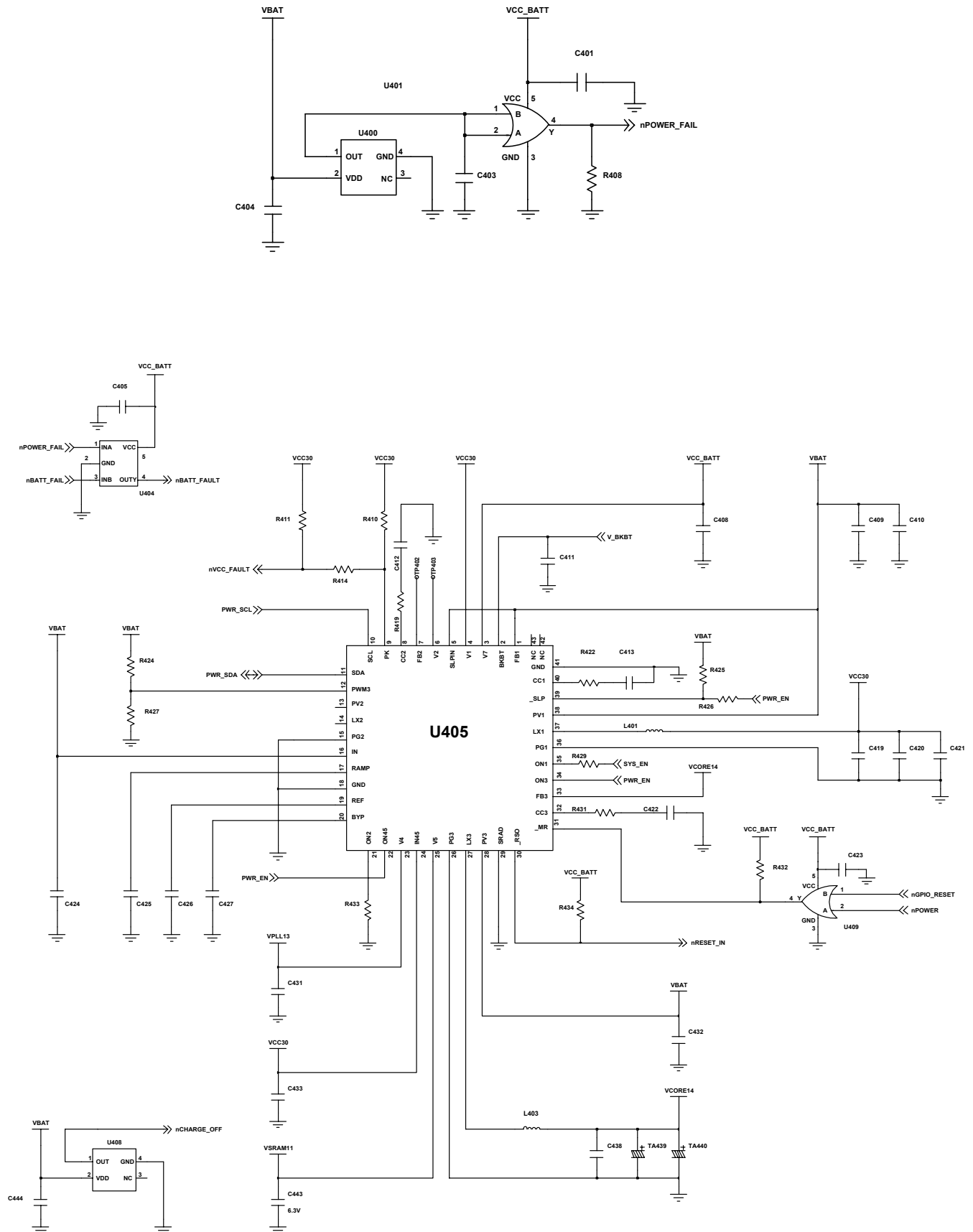
### 7-1. Logic Section

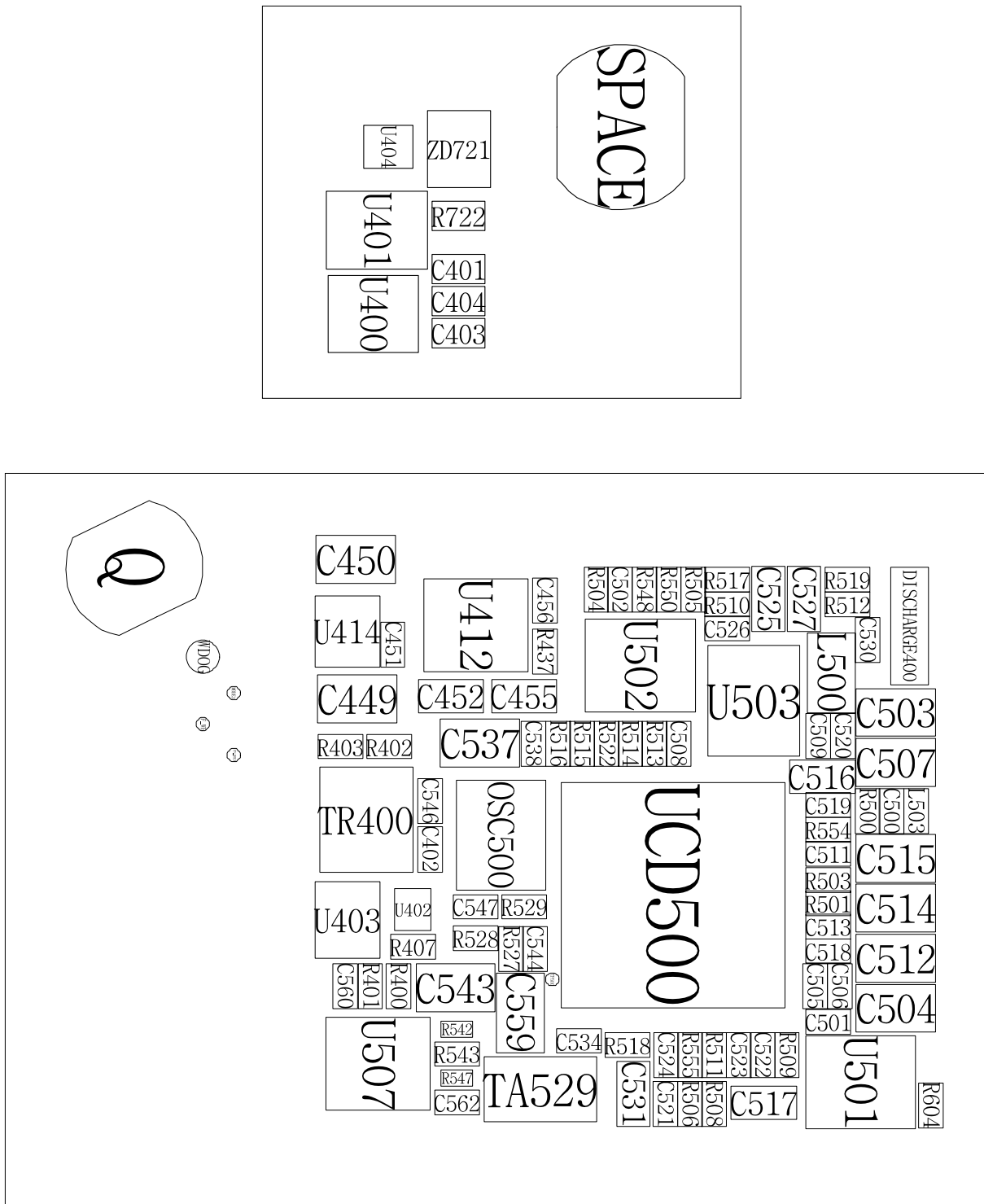
#### 7-1-1. Power On

##### PDA Part

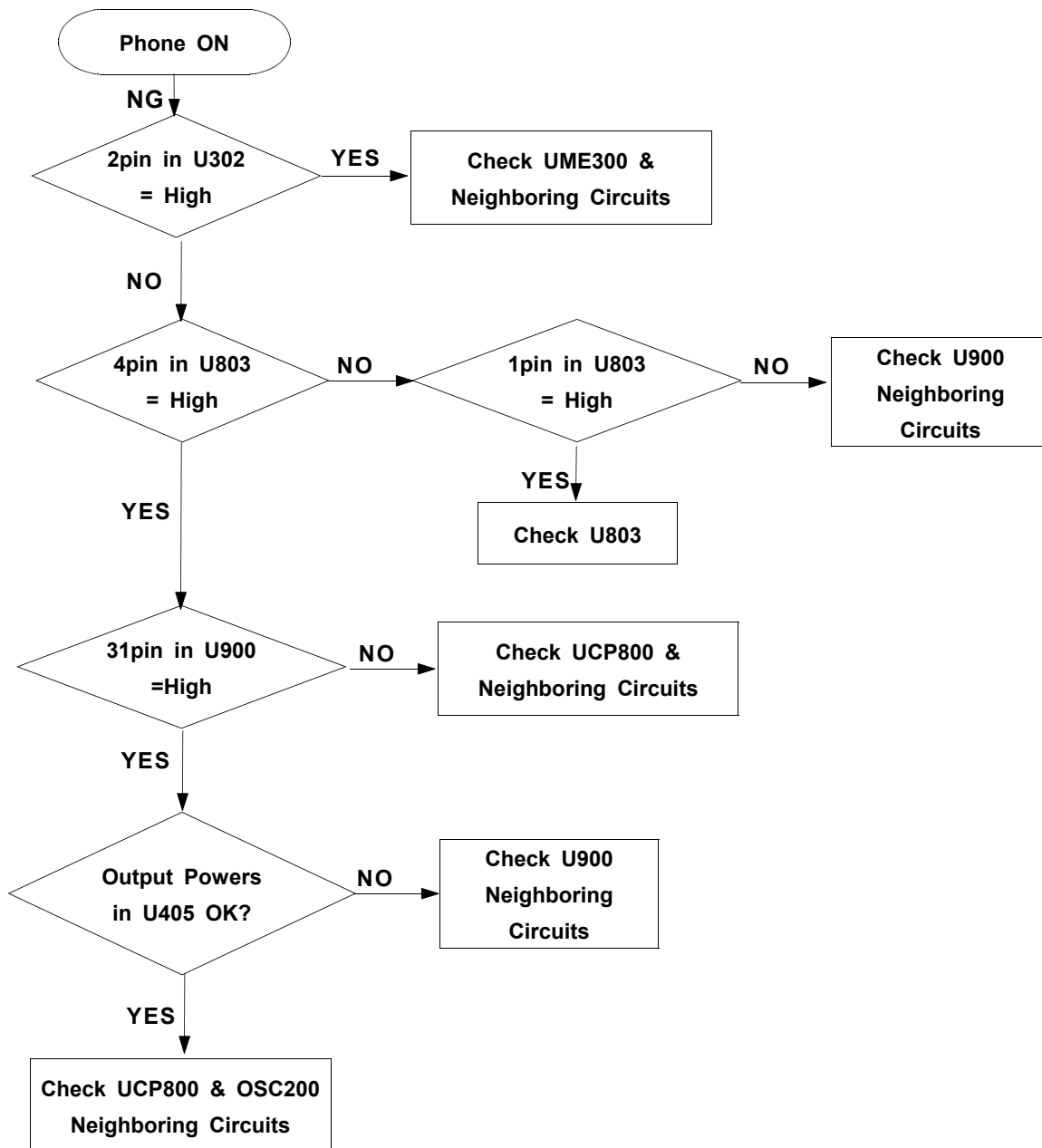


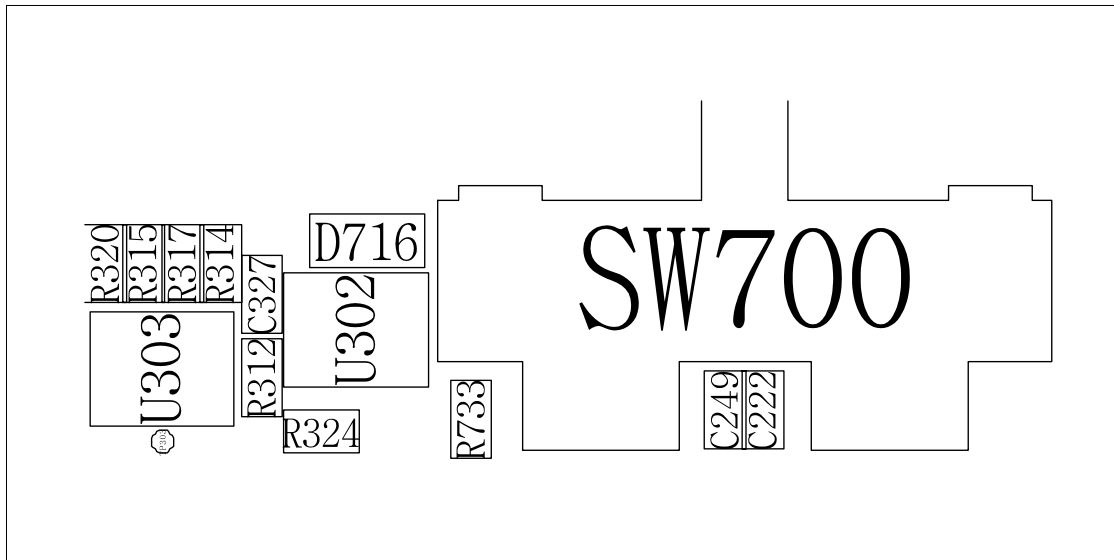
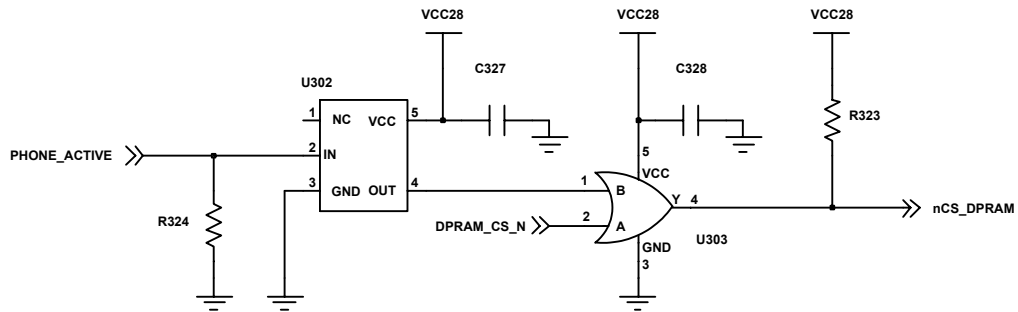
## Flow Chart of Troubleshooting

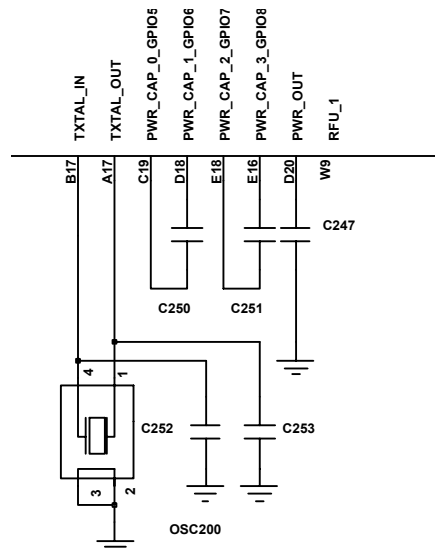




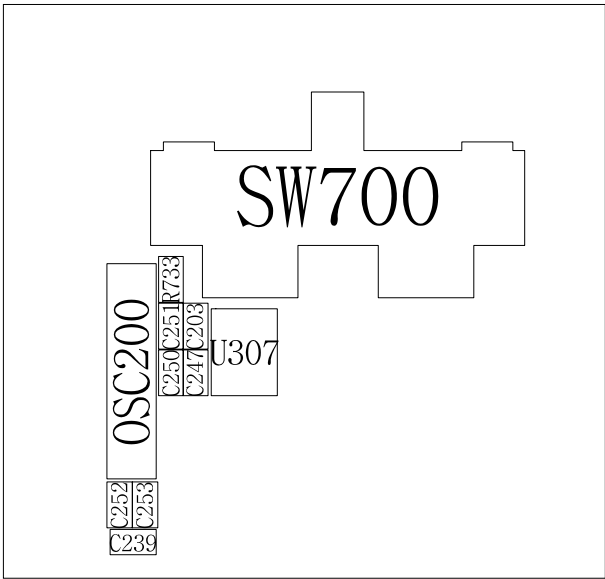
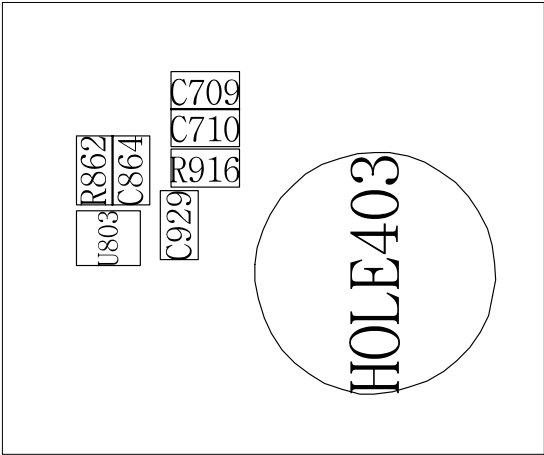
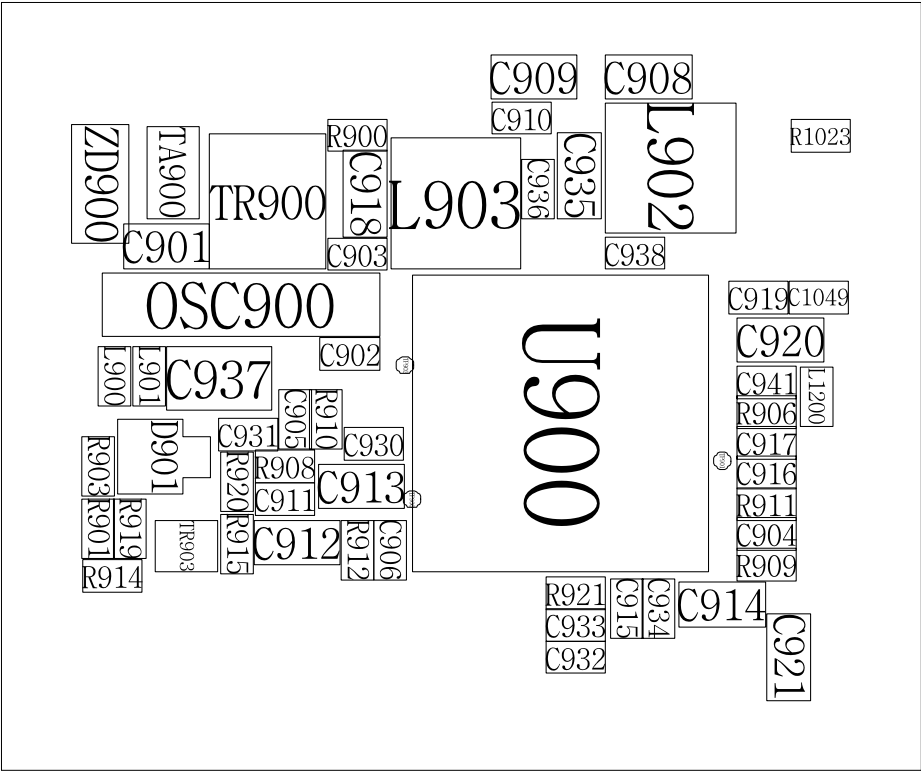
PHONE Part



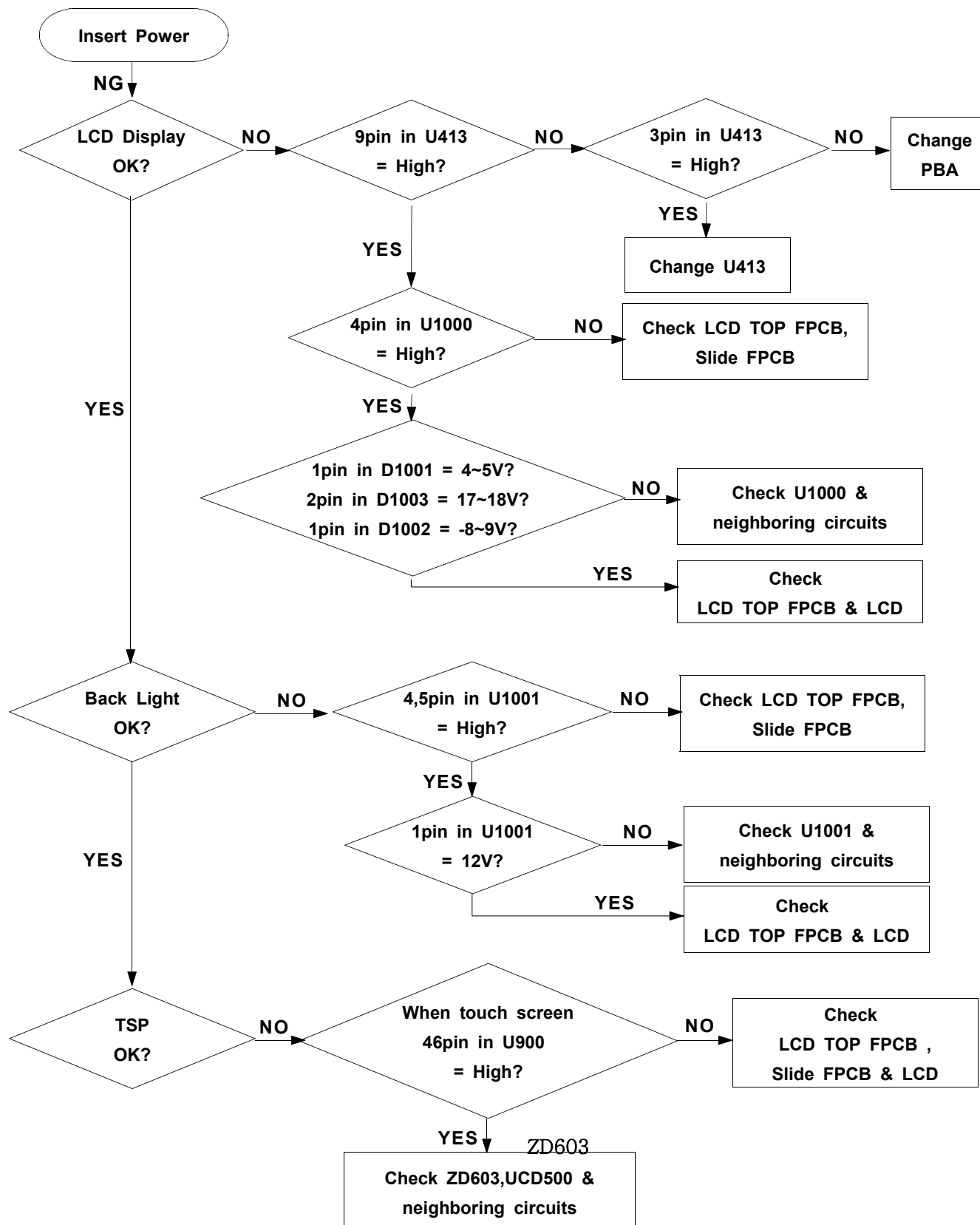


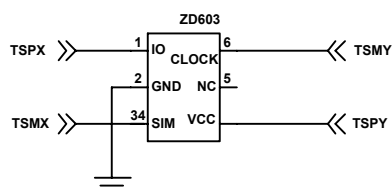
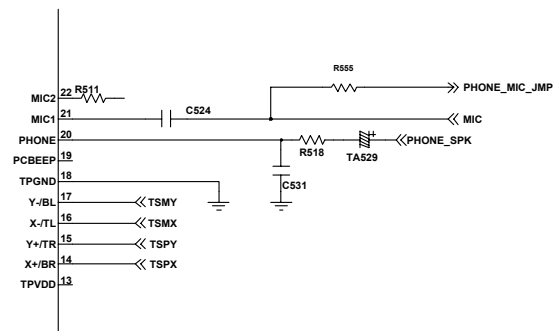
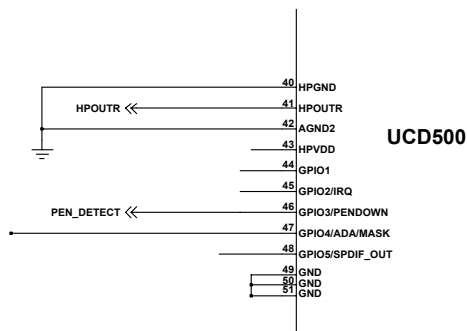
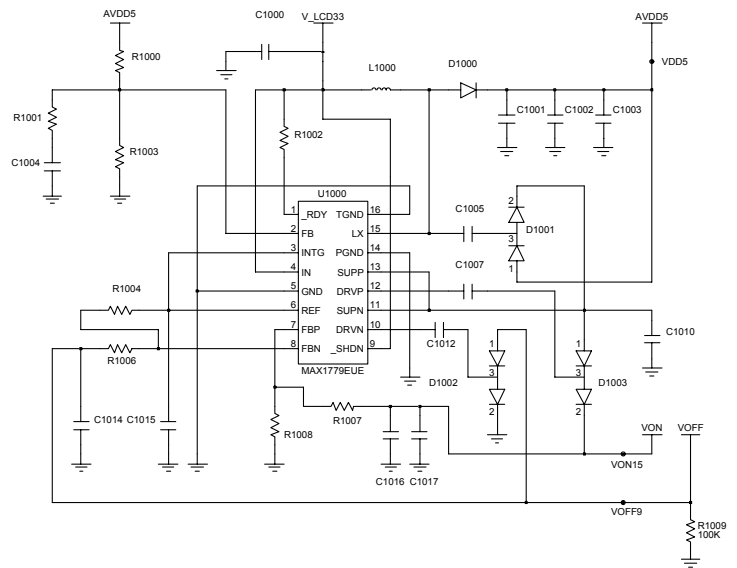
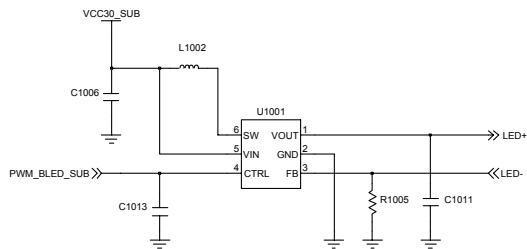
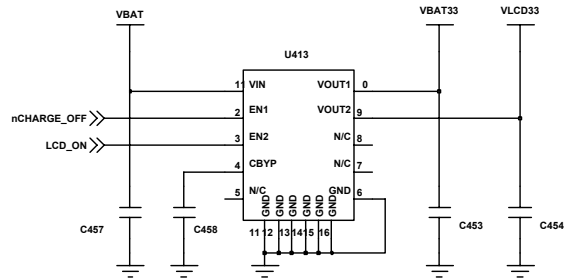






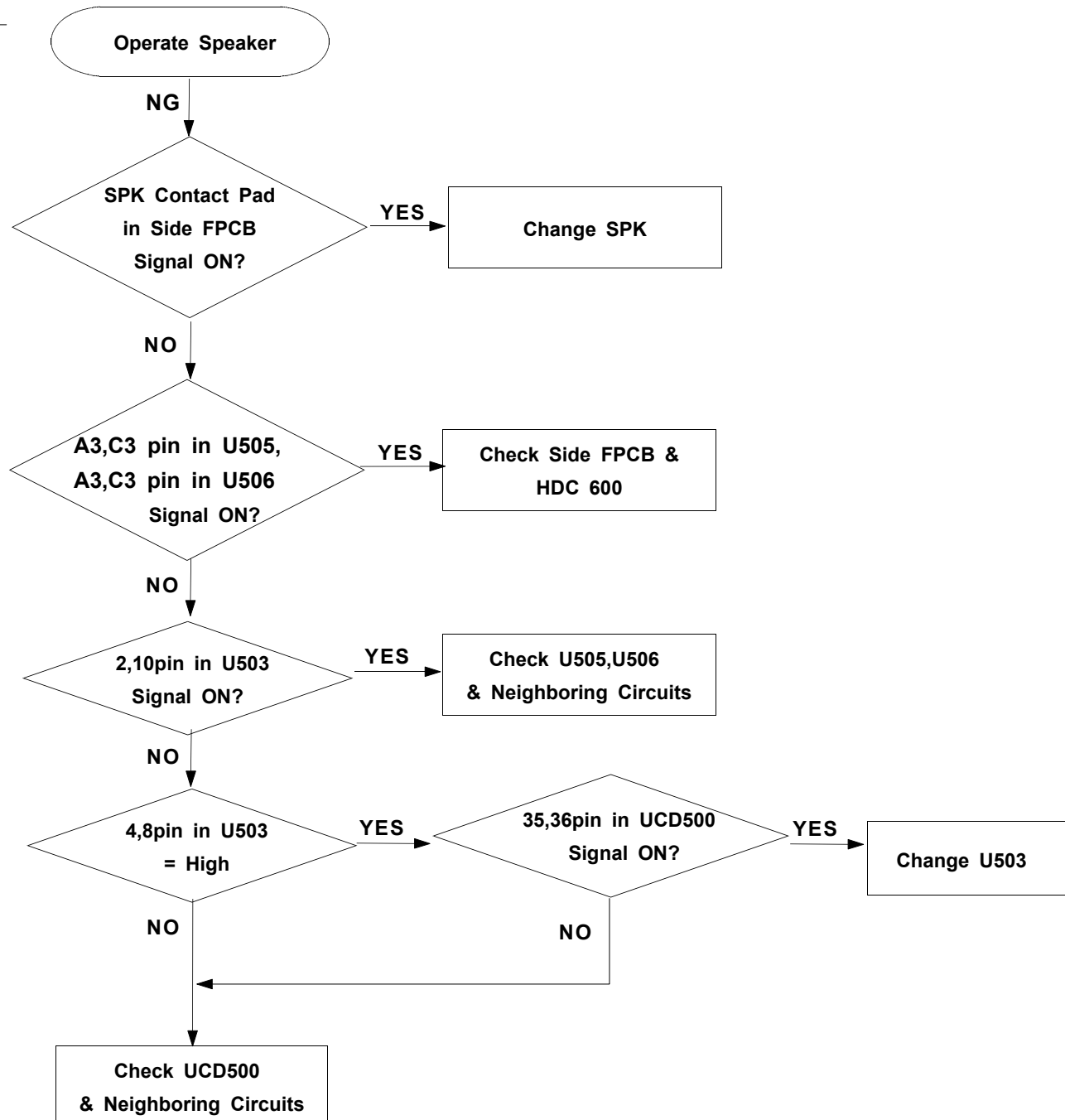
## 7-1-2. LCD Working

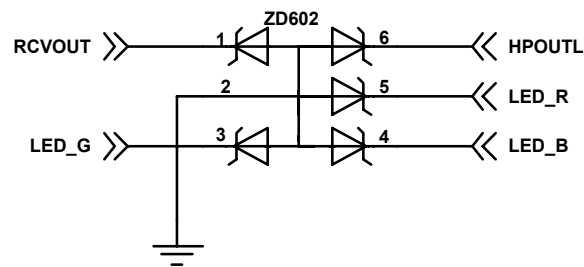
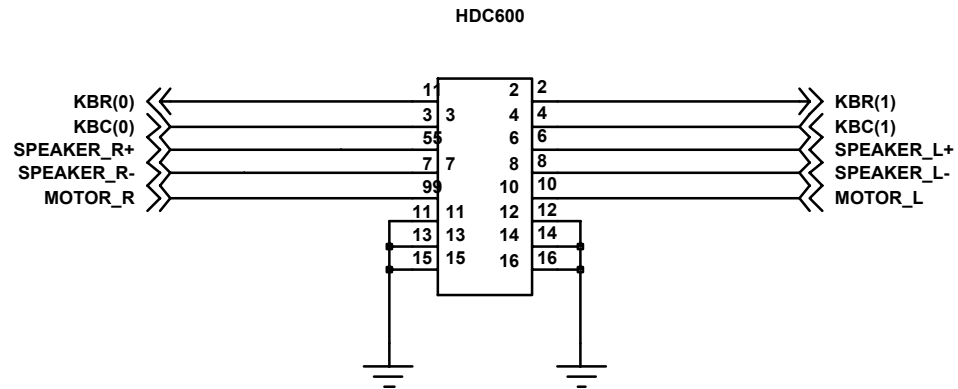




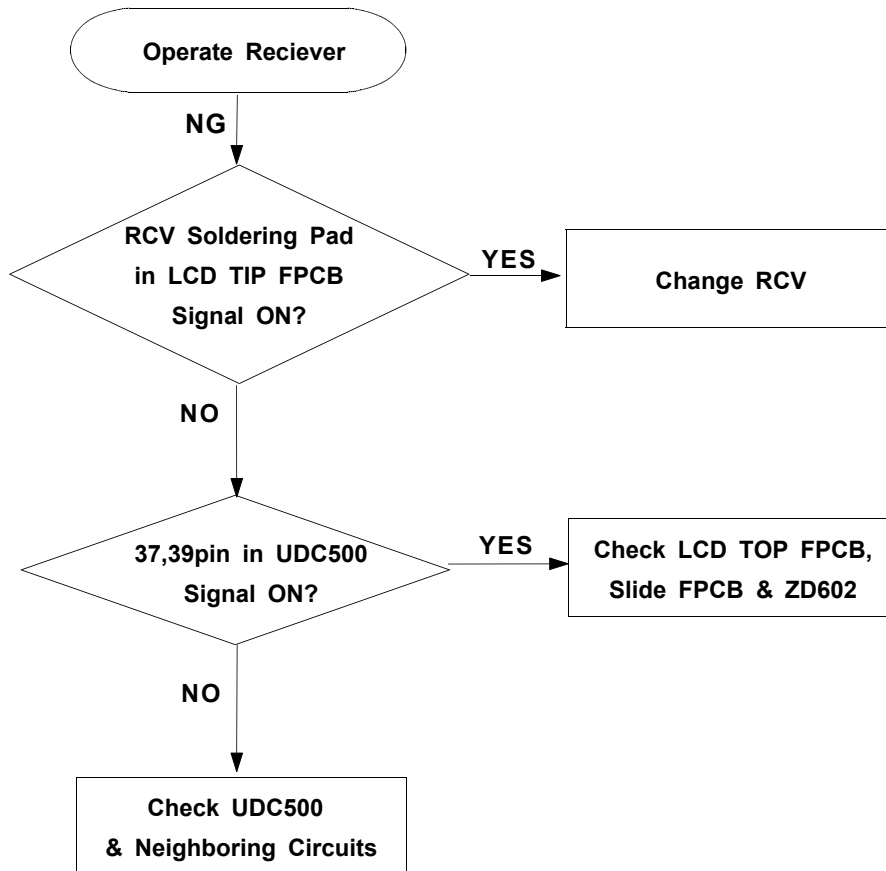
### 7-1-3. Audio Working

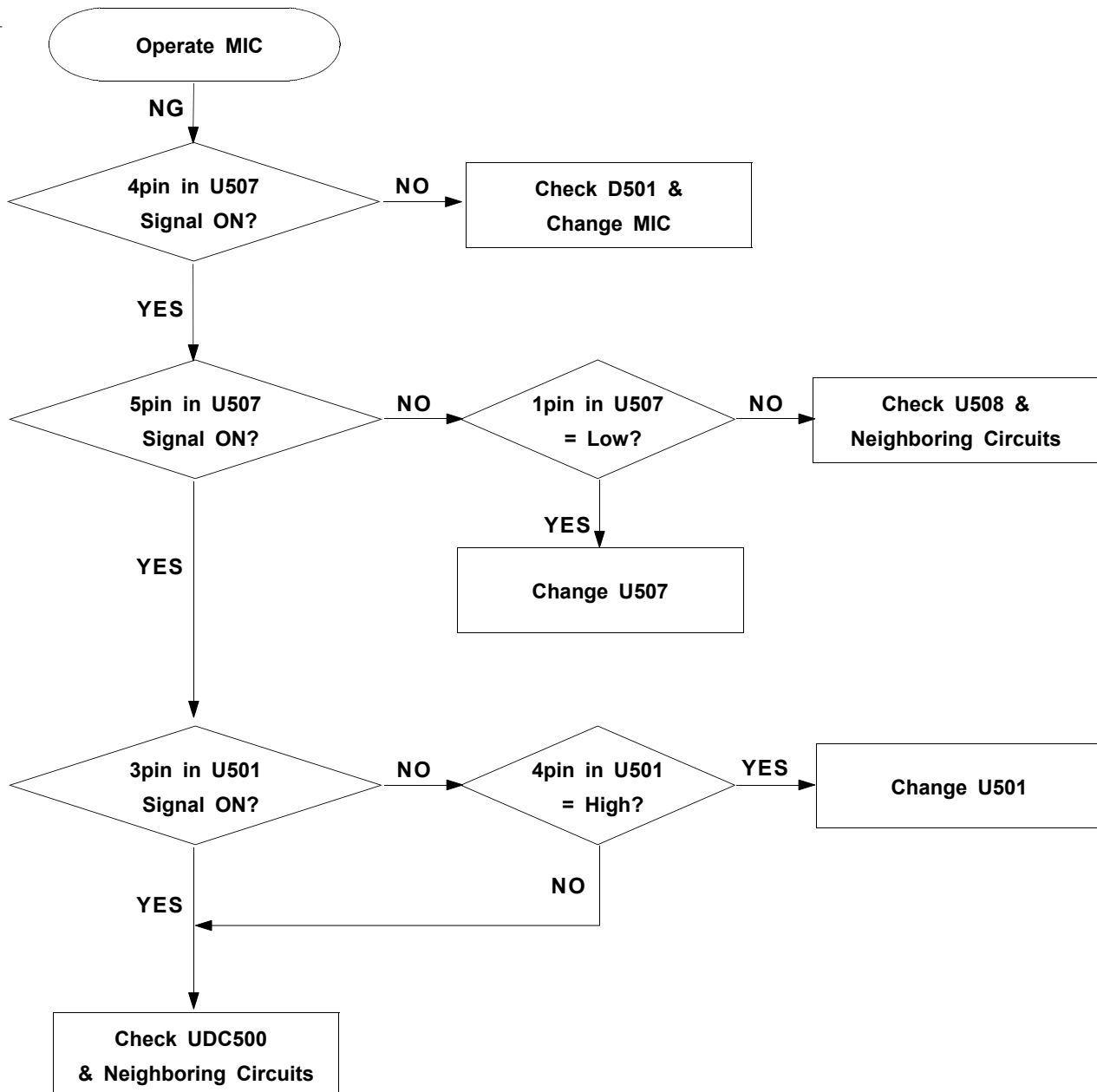
#### Speaker Working



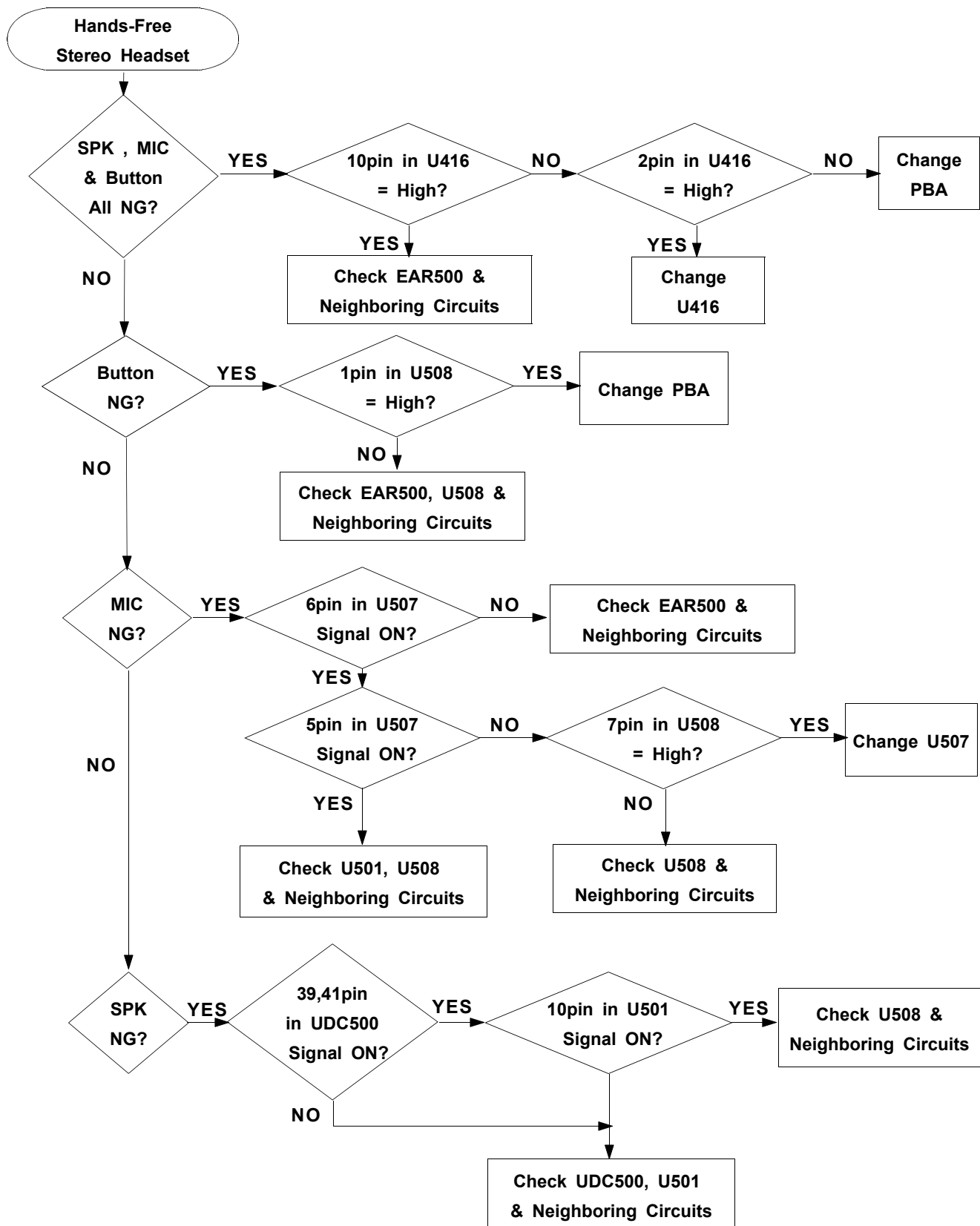


Receiver Working



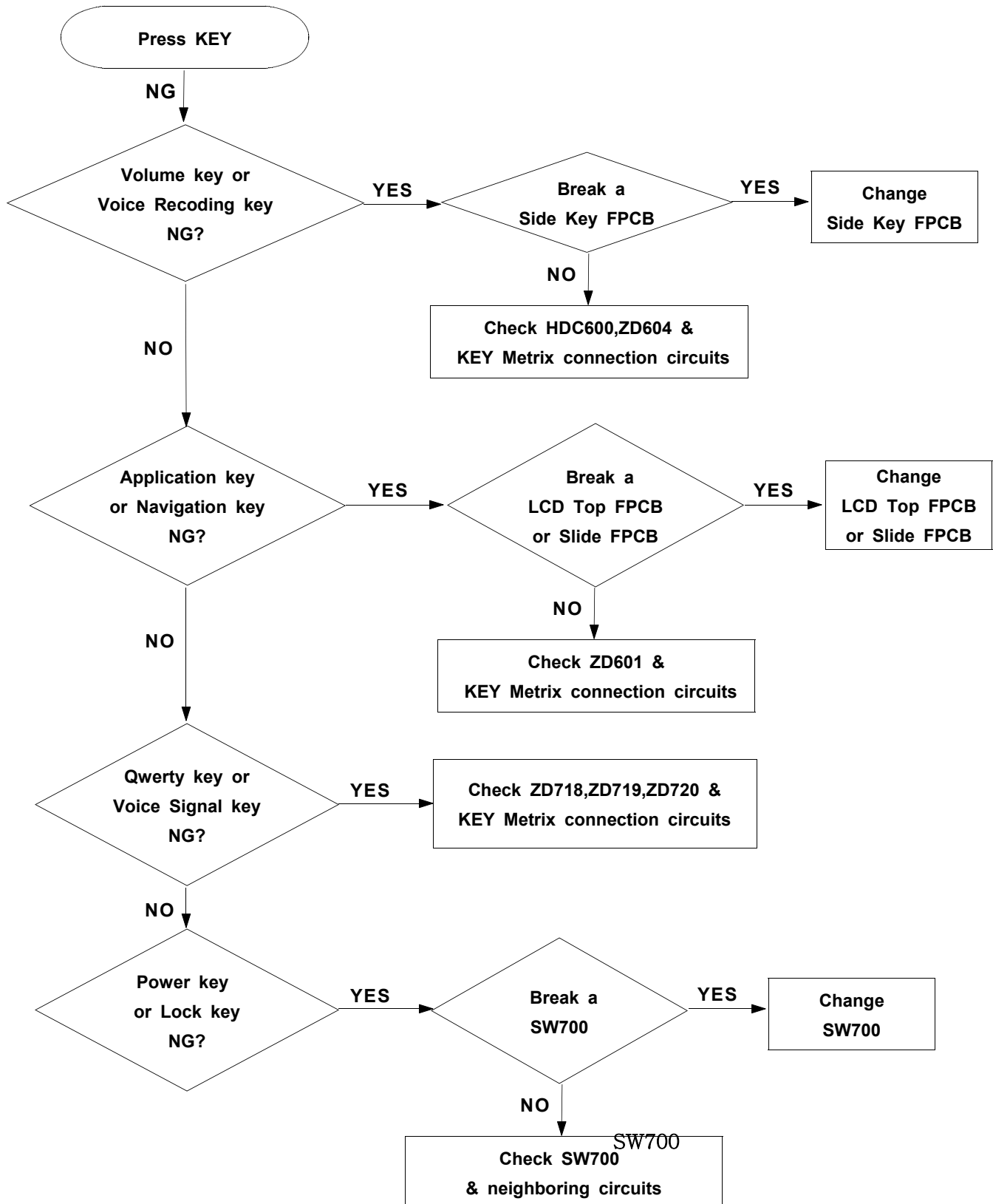
Mic Working

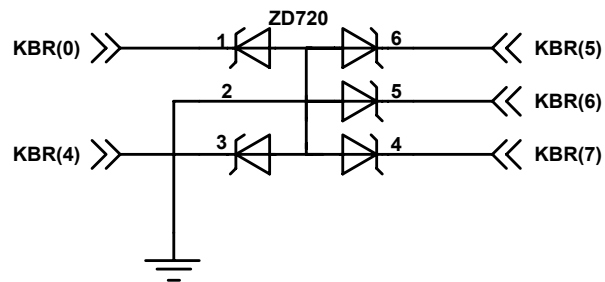
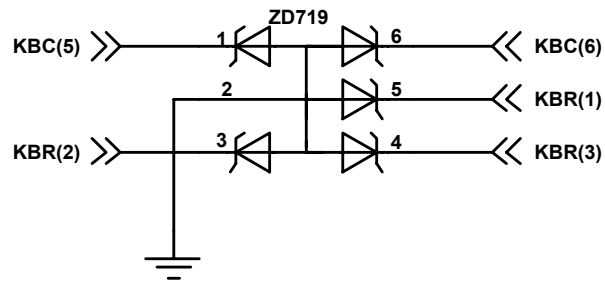
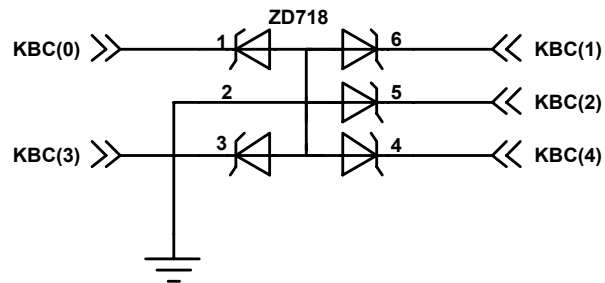
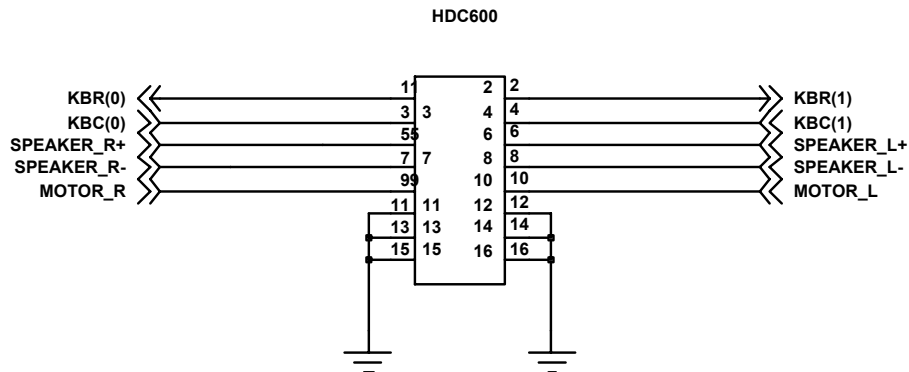
# Hands-Free Stereo Headset Working

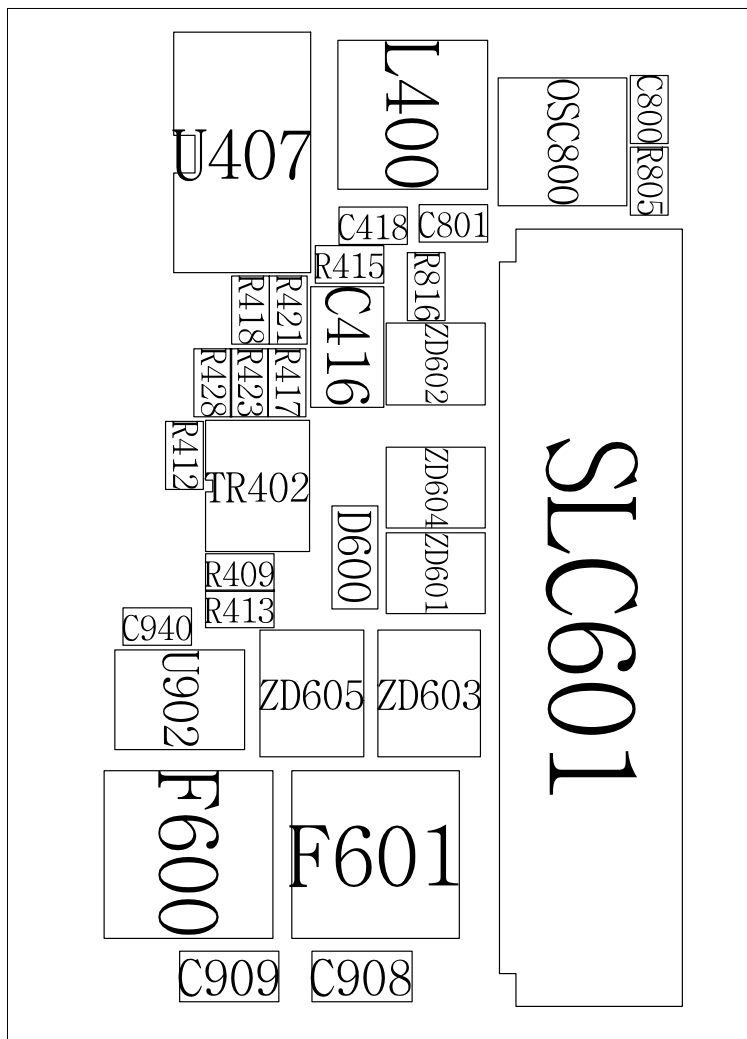
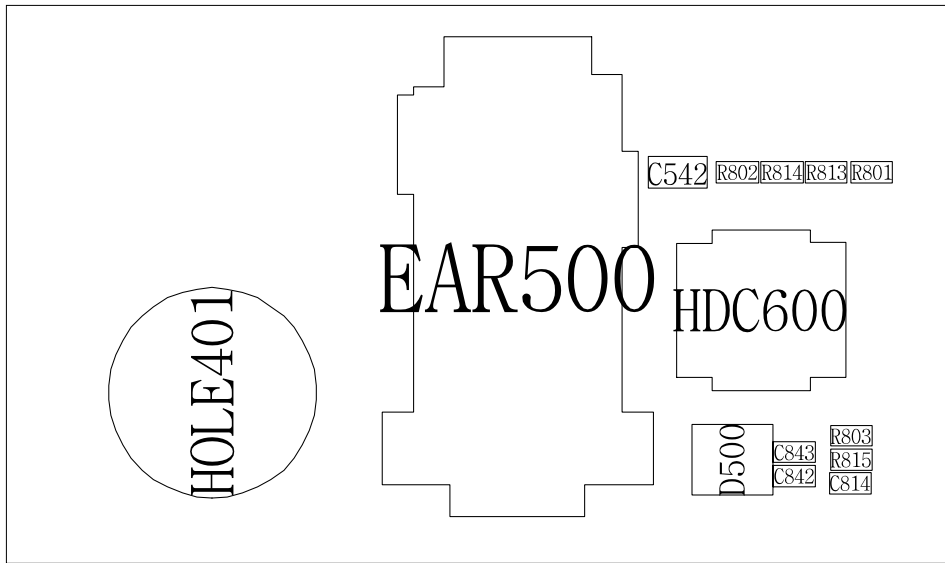




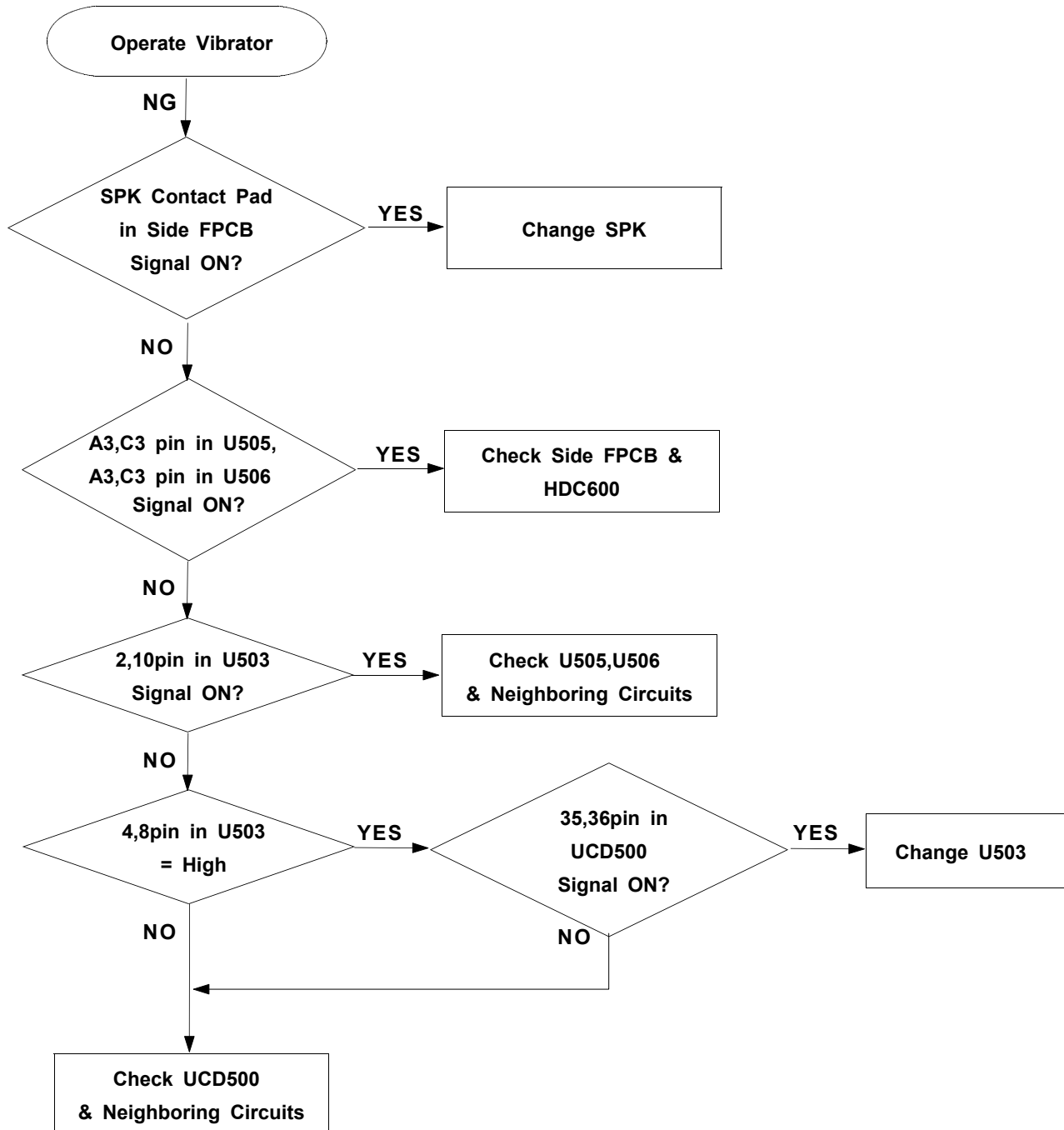
## 7-1-4. KEY Working

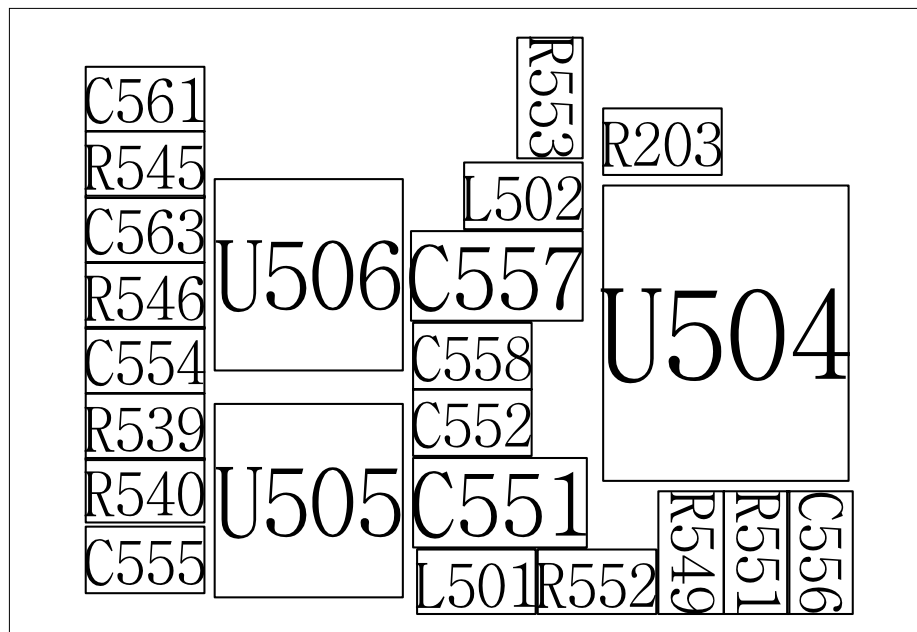
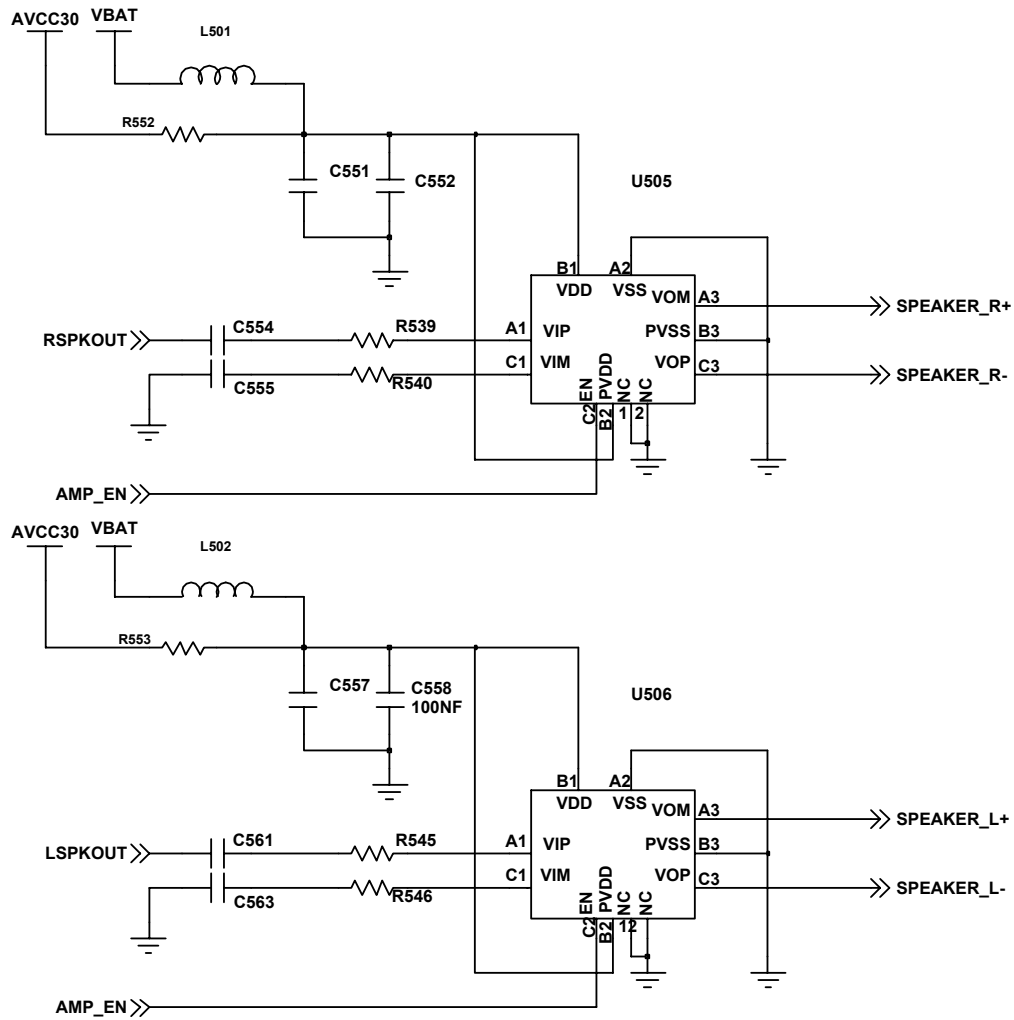




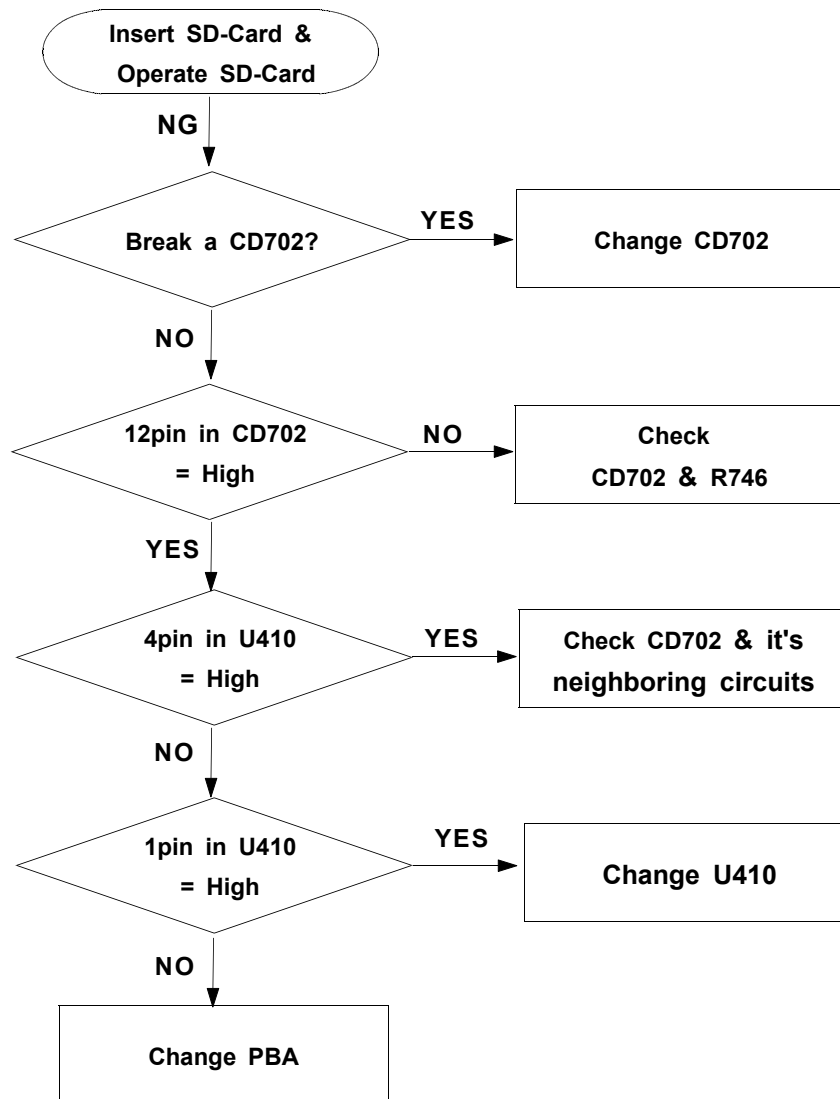


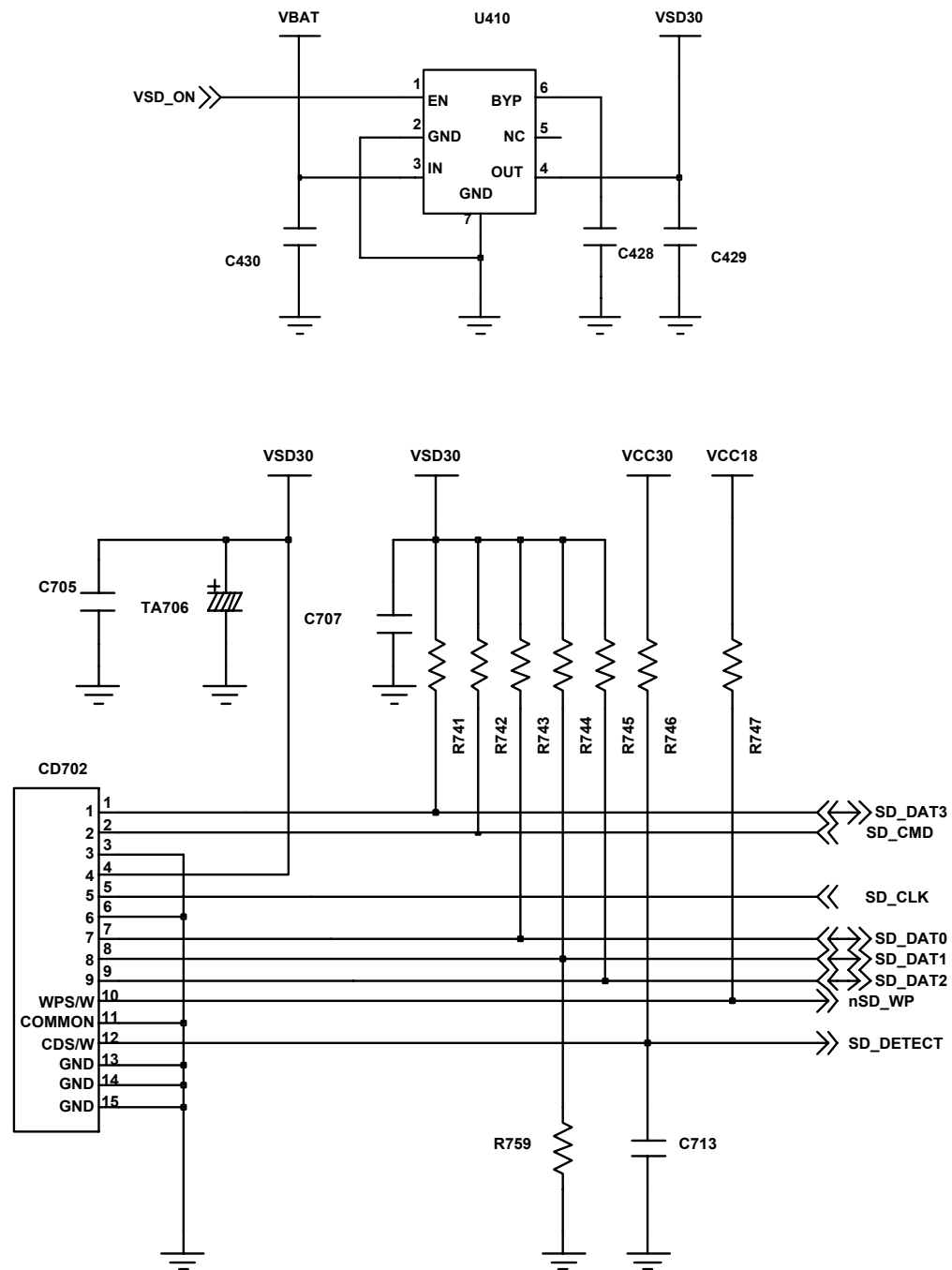
### 7-1-5. Vibrator Working



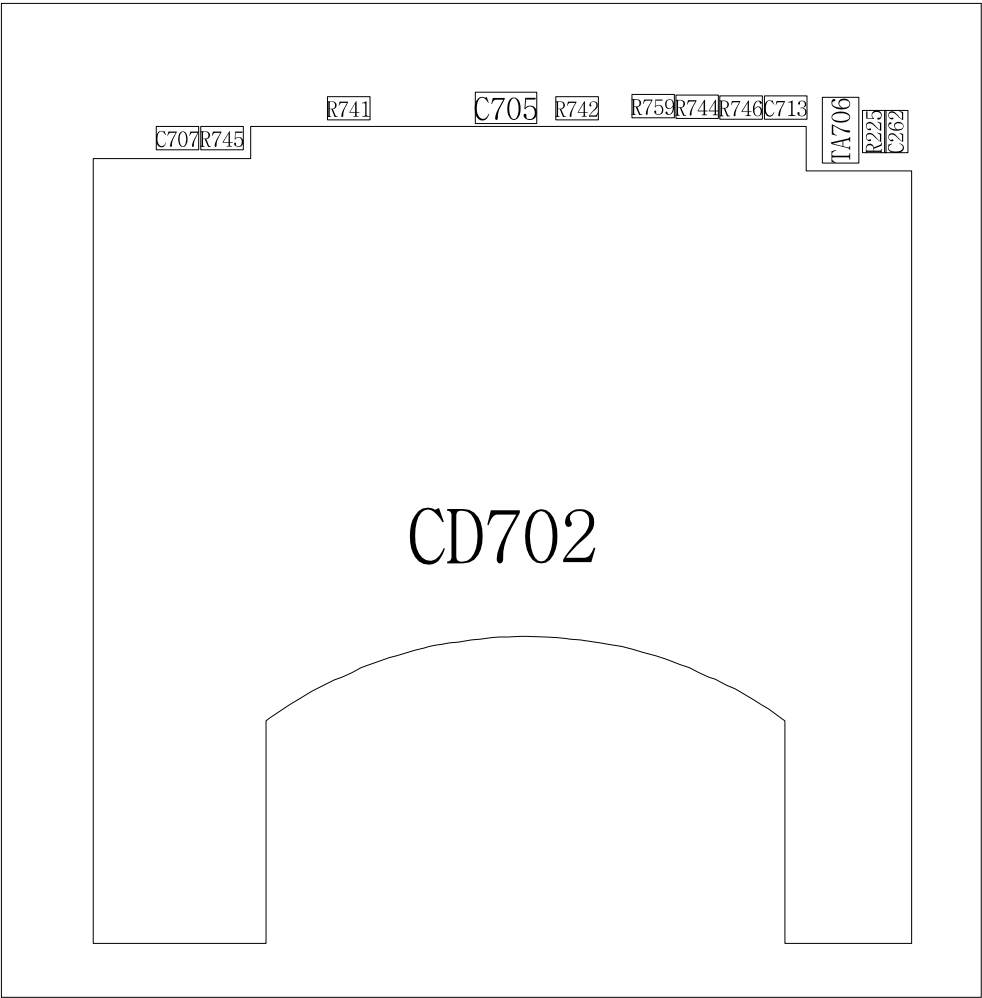
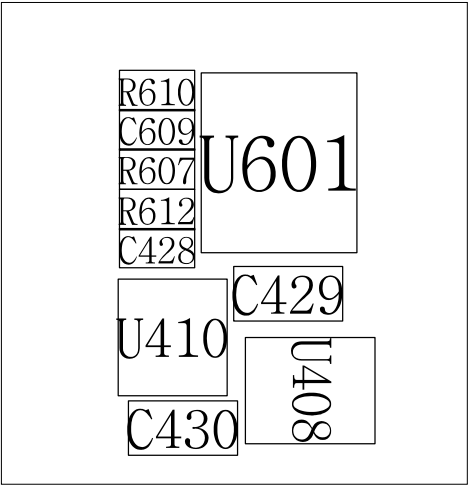


### 7-1-6. SD-Card Working



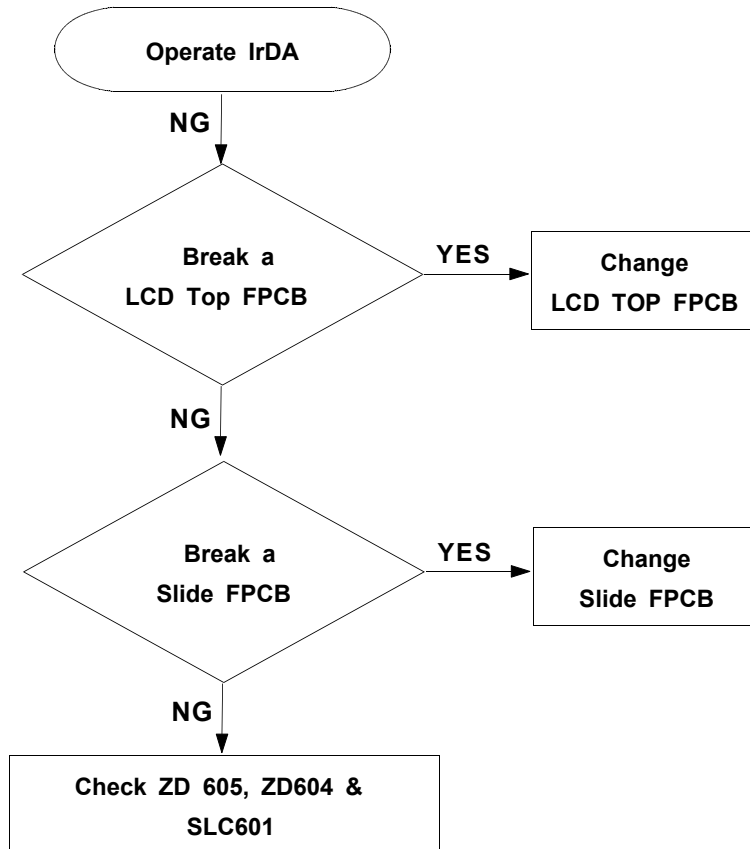


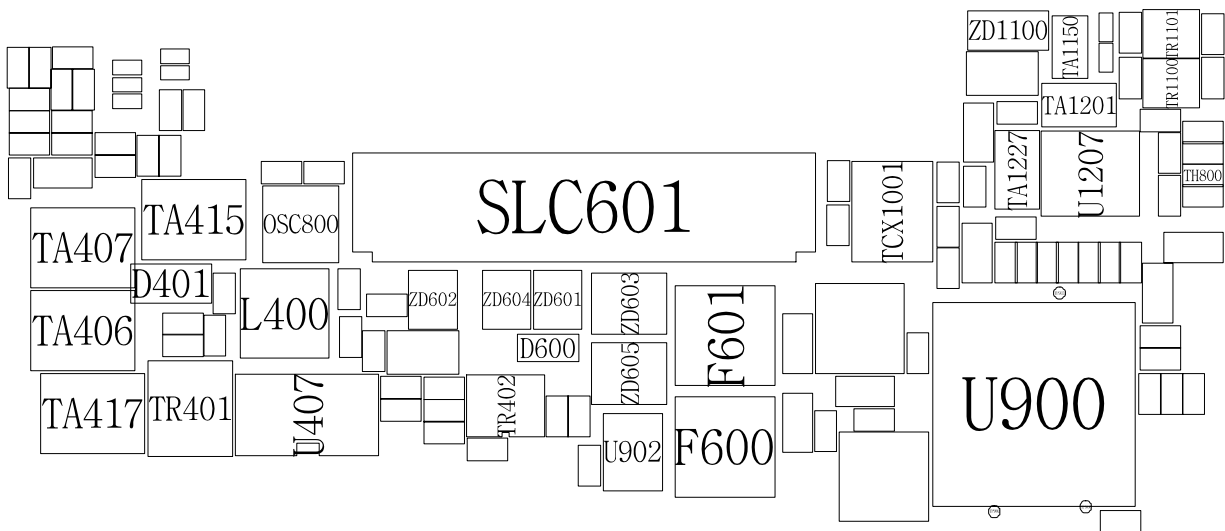
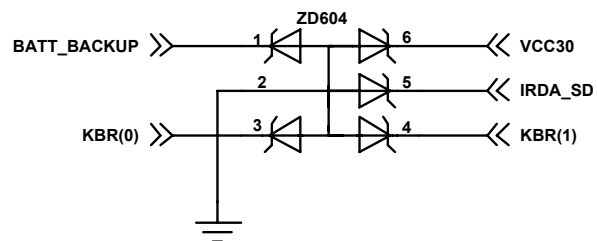
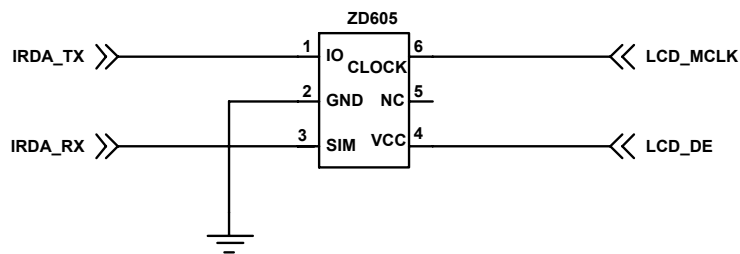
## SD\_CARD

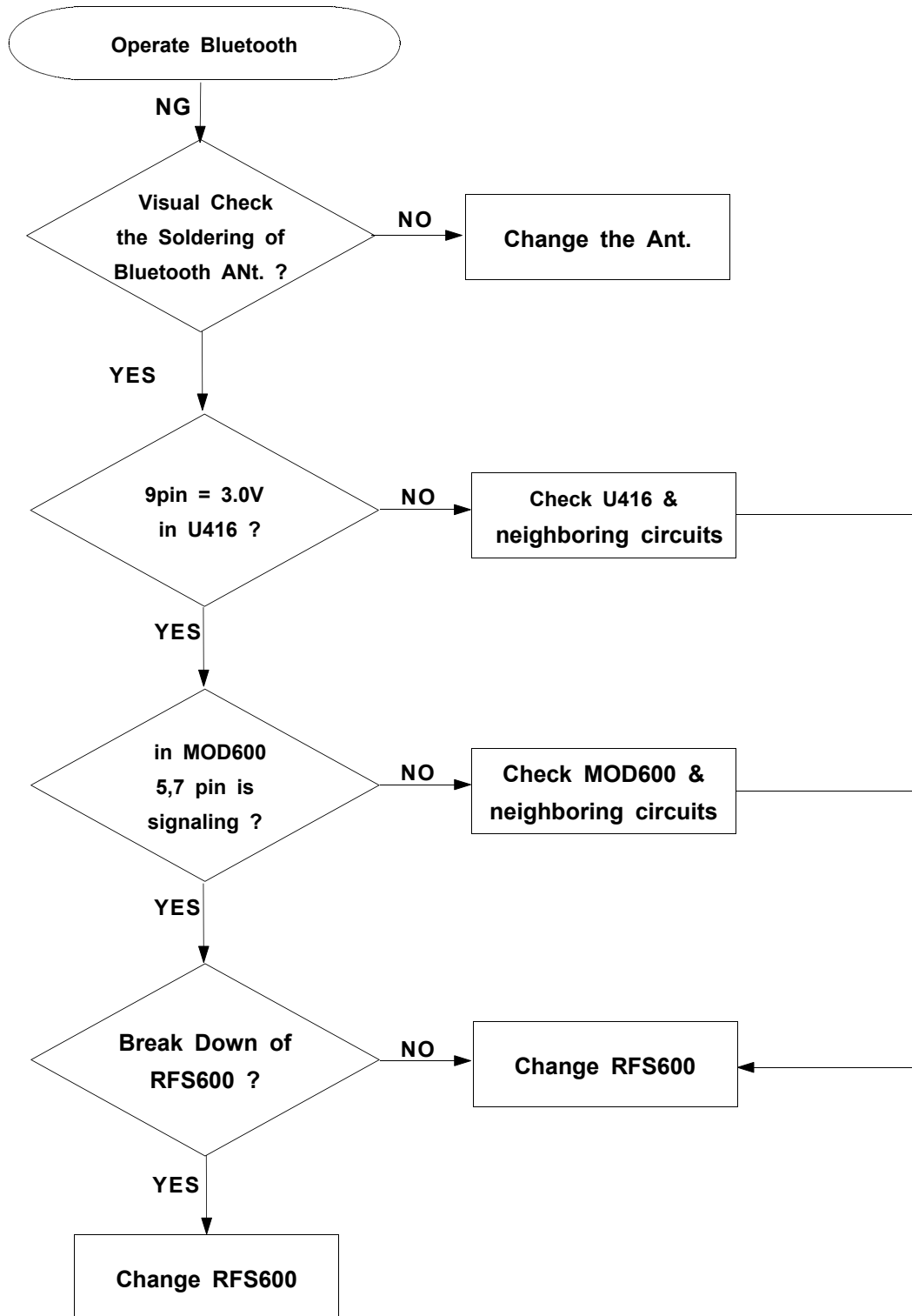


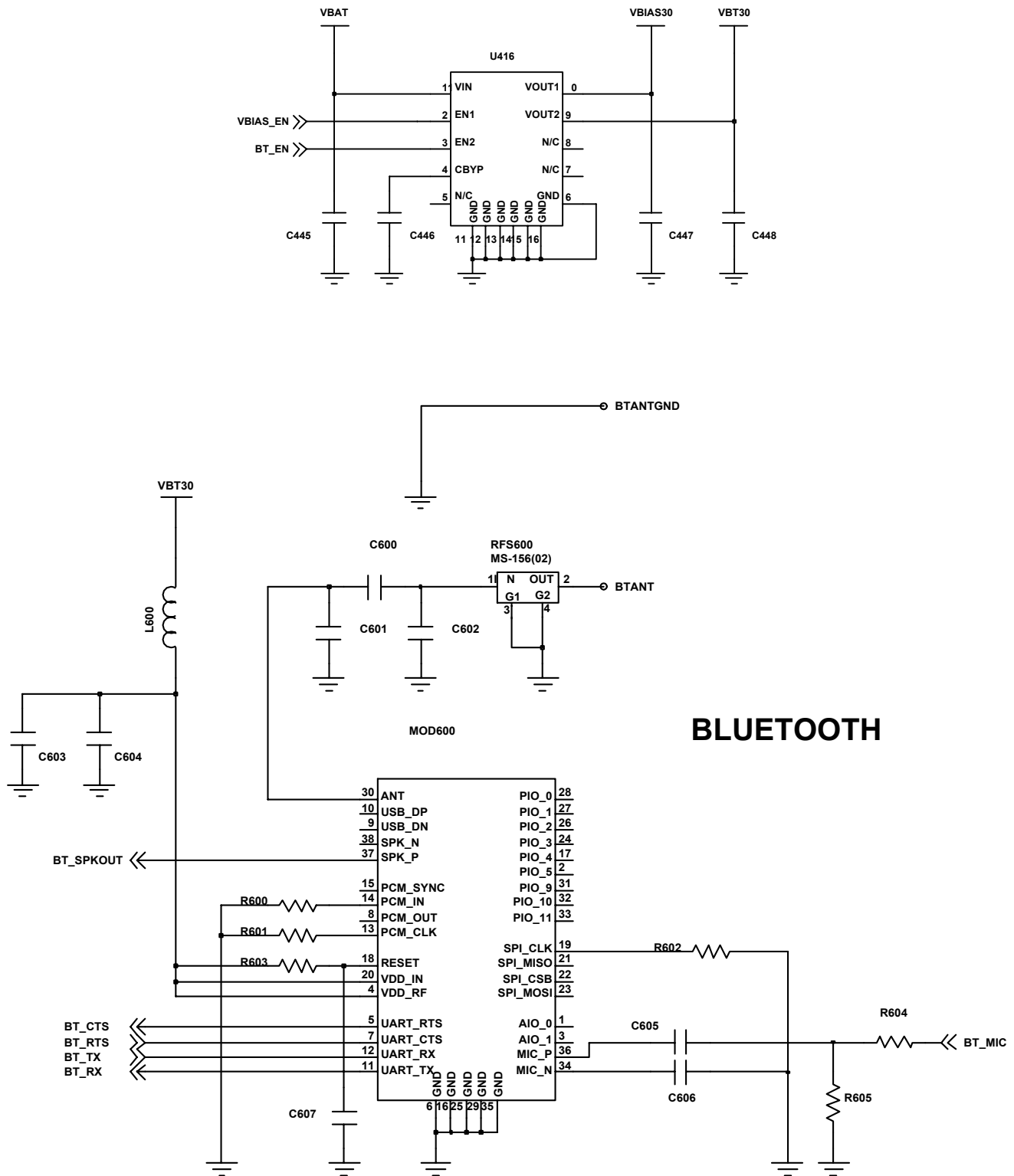


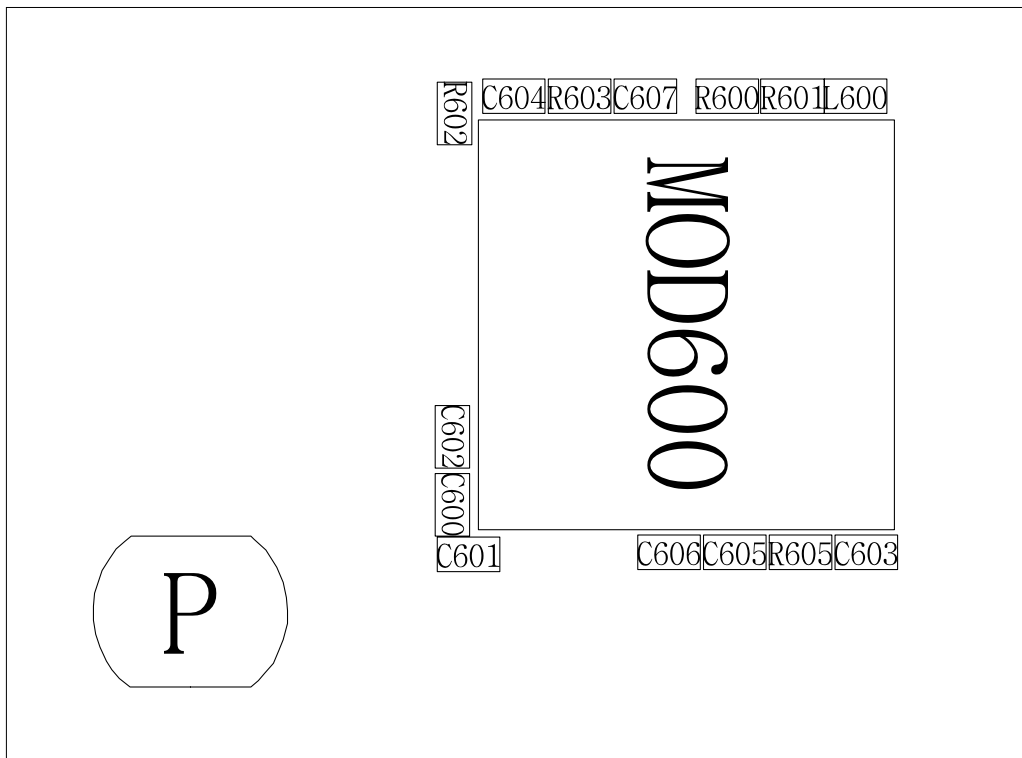
### 7-1-7. IrDA Working





**7-1-9. Bluetooth Working**

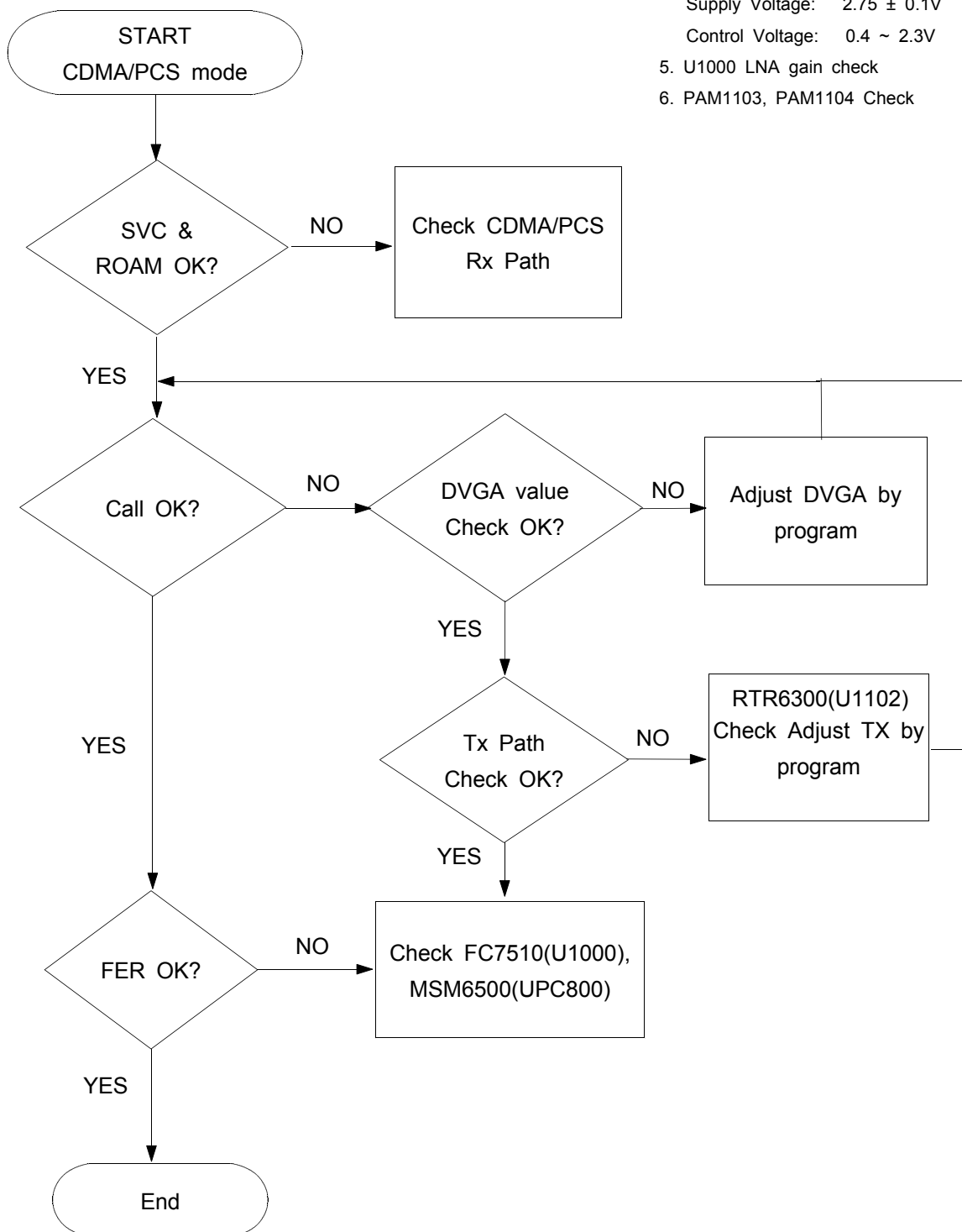




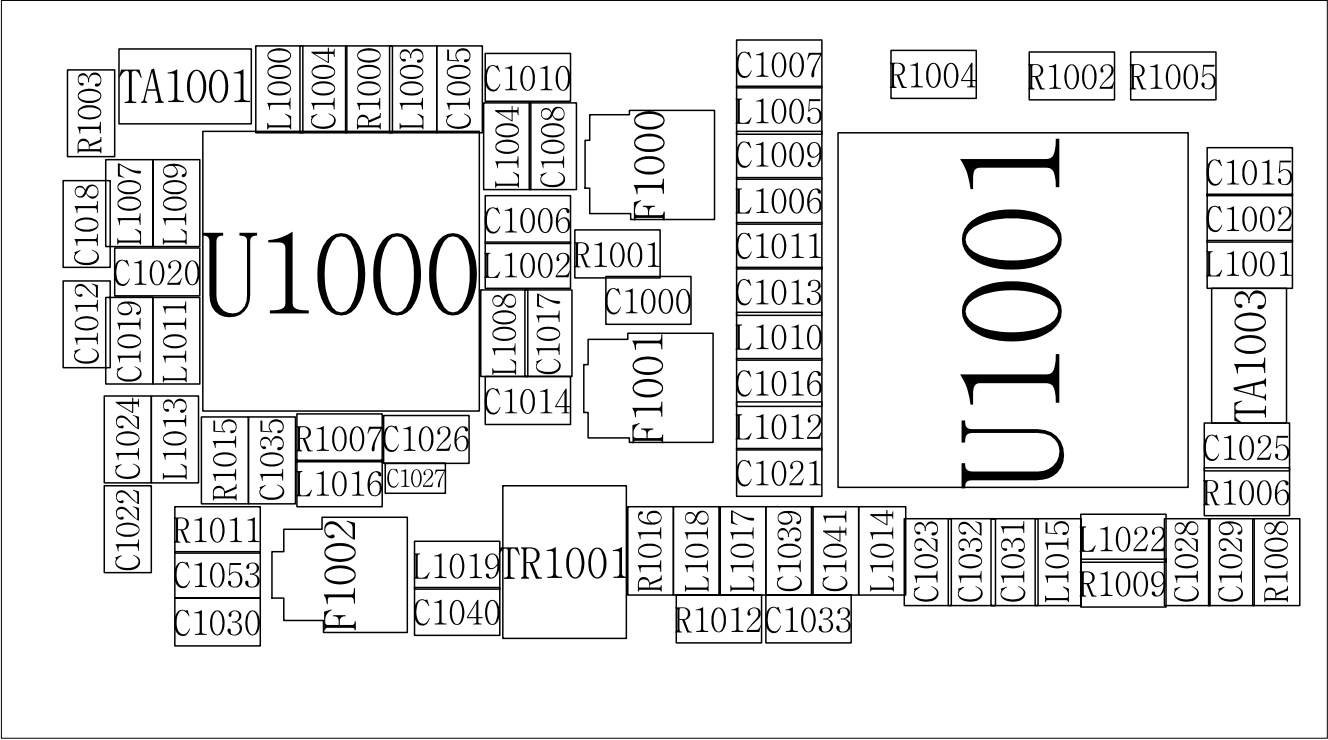
## 7-2. RX

### 7-2-1. CDMA/PCS mode

1. visual check! (soldering)
2. S/W Mode Check : CDMA Mode Check
3. TCX1001 Check : 19.2MHz
4. VCO(VCO1000) voltage/frequency level check  
Frequency :  $1715\text{MHz} < f < 1788\text{MHz}$   
Supply Voltage:  $2.75 \pm 0.1\text{V}$   
Control Voltage:  $0.4 \sim 2.3\text{V}$
5. U1000 LNA gain check
6. PAM1103, PAM1104 Check



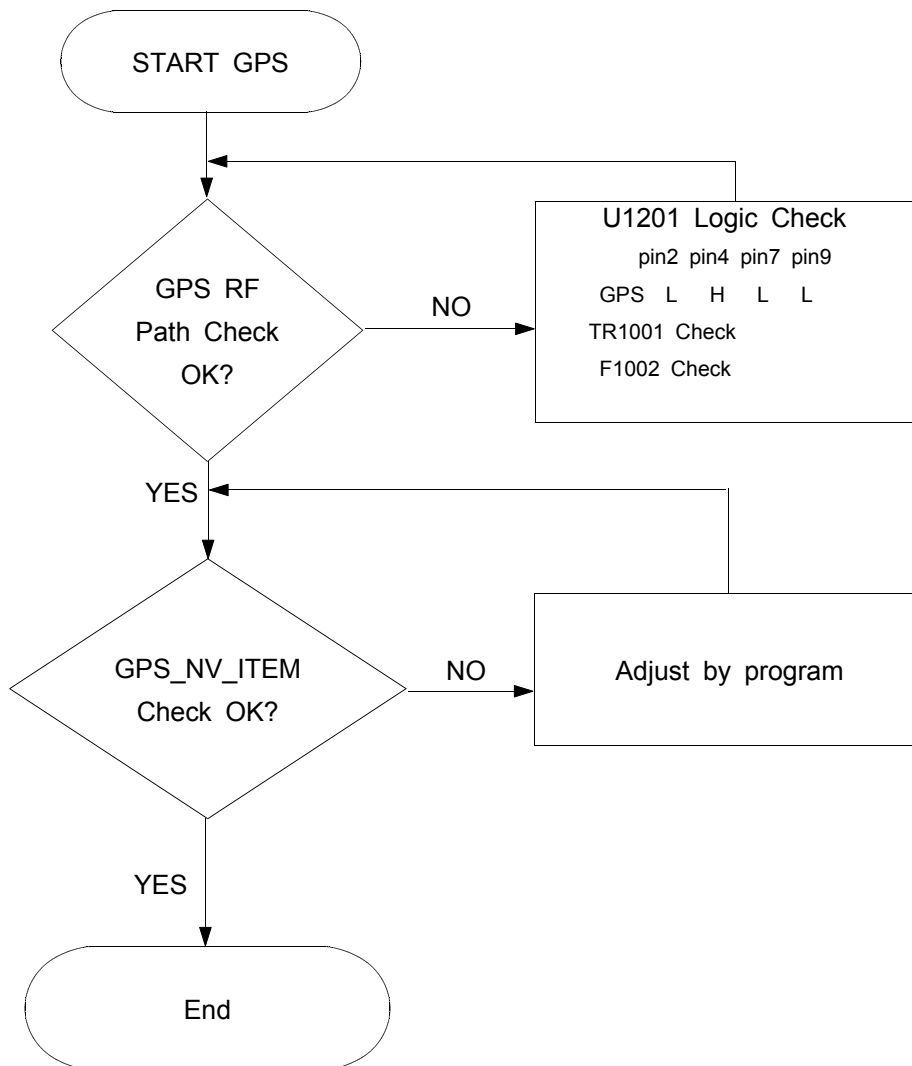


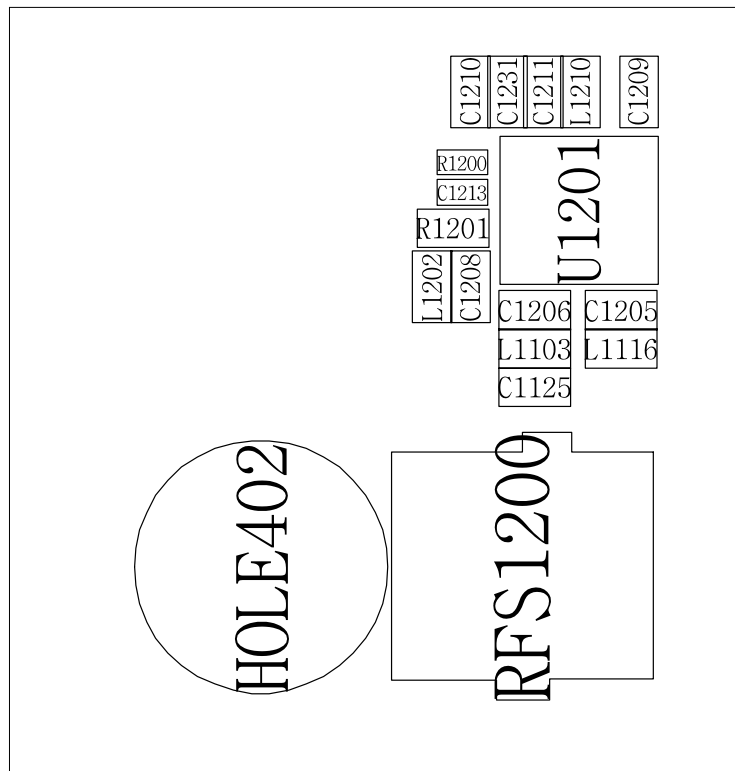
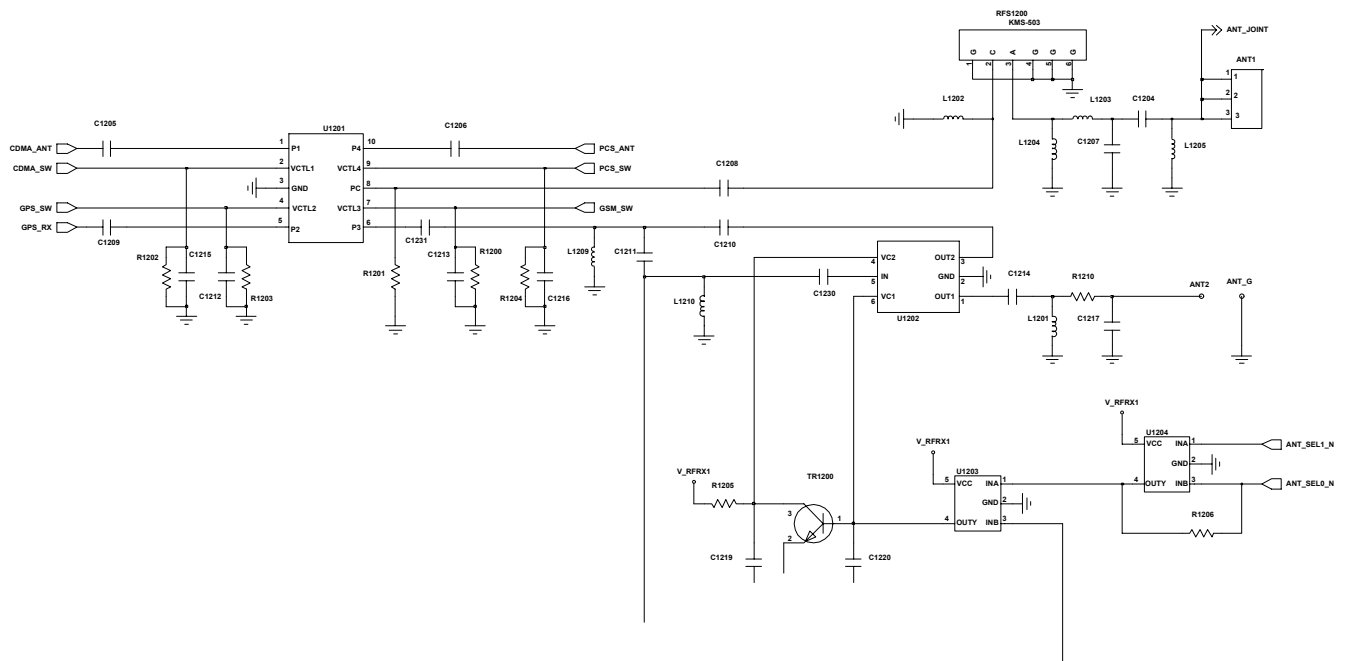




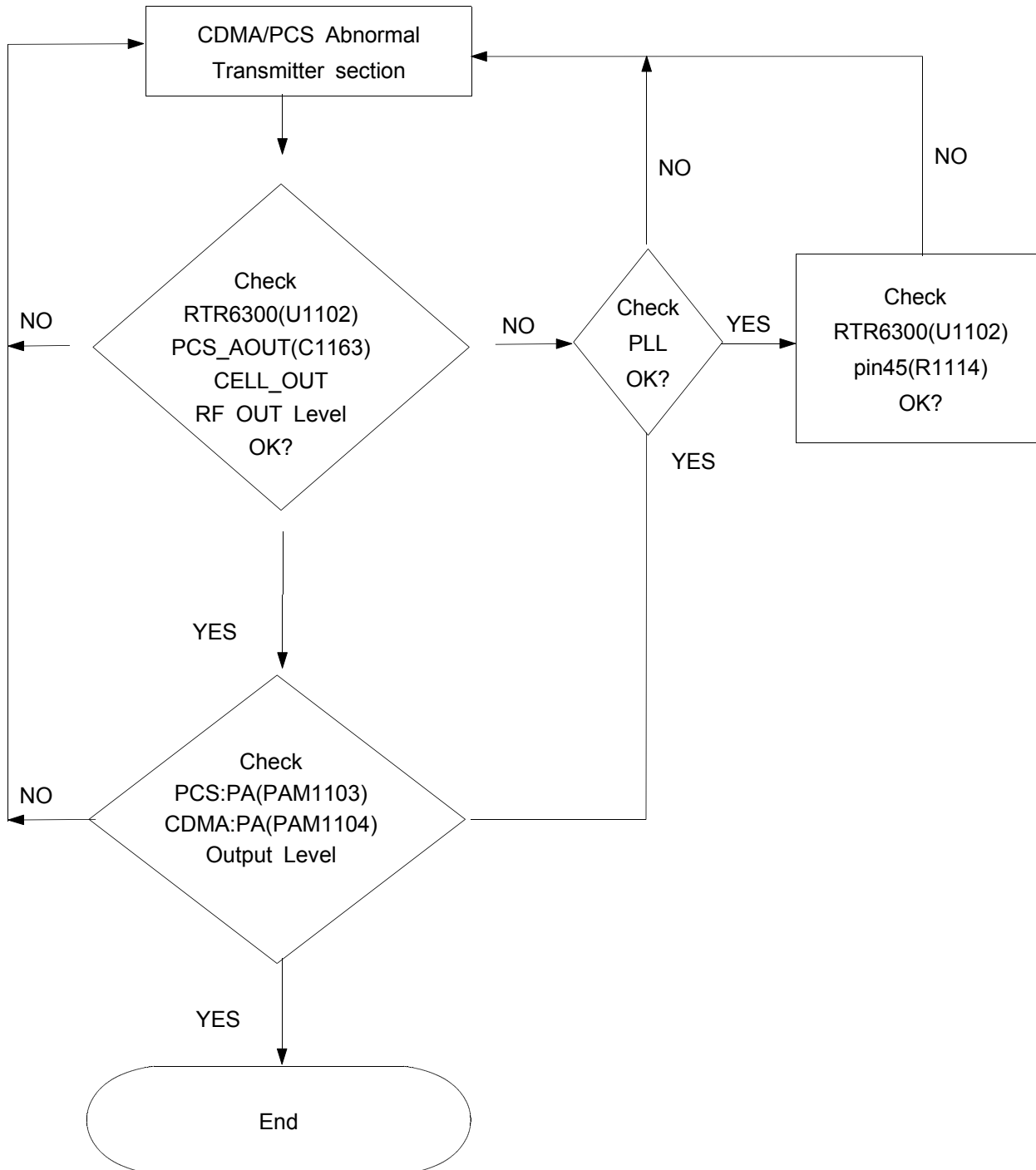
**7-2-2. GPS Mode**

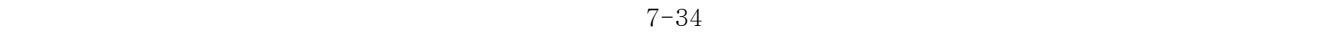
1. visual check! (soldering)
2. OSC800 Check : 19.2MHz

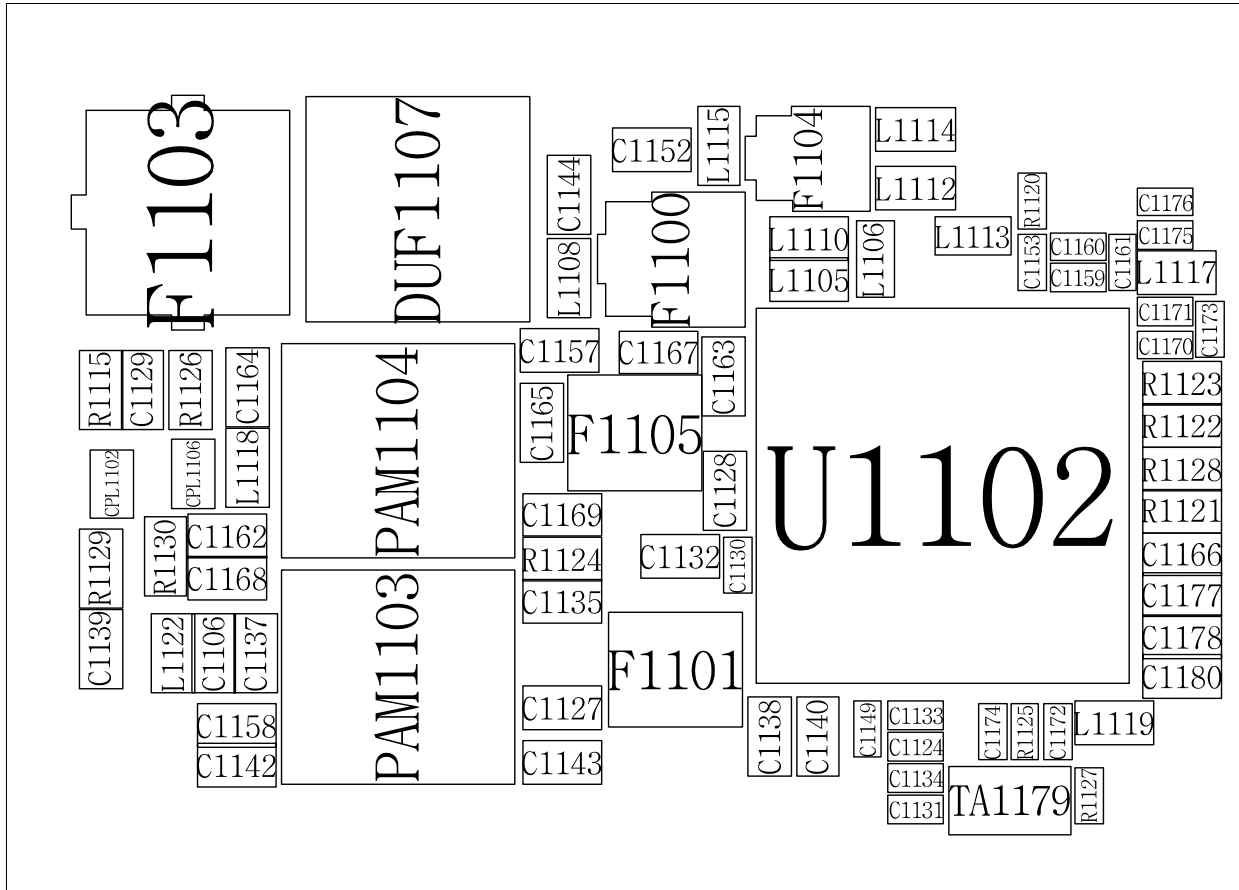




## 7-3. Tx

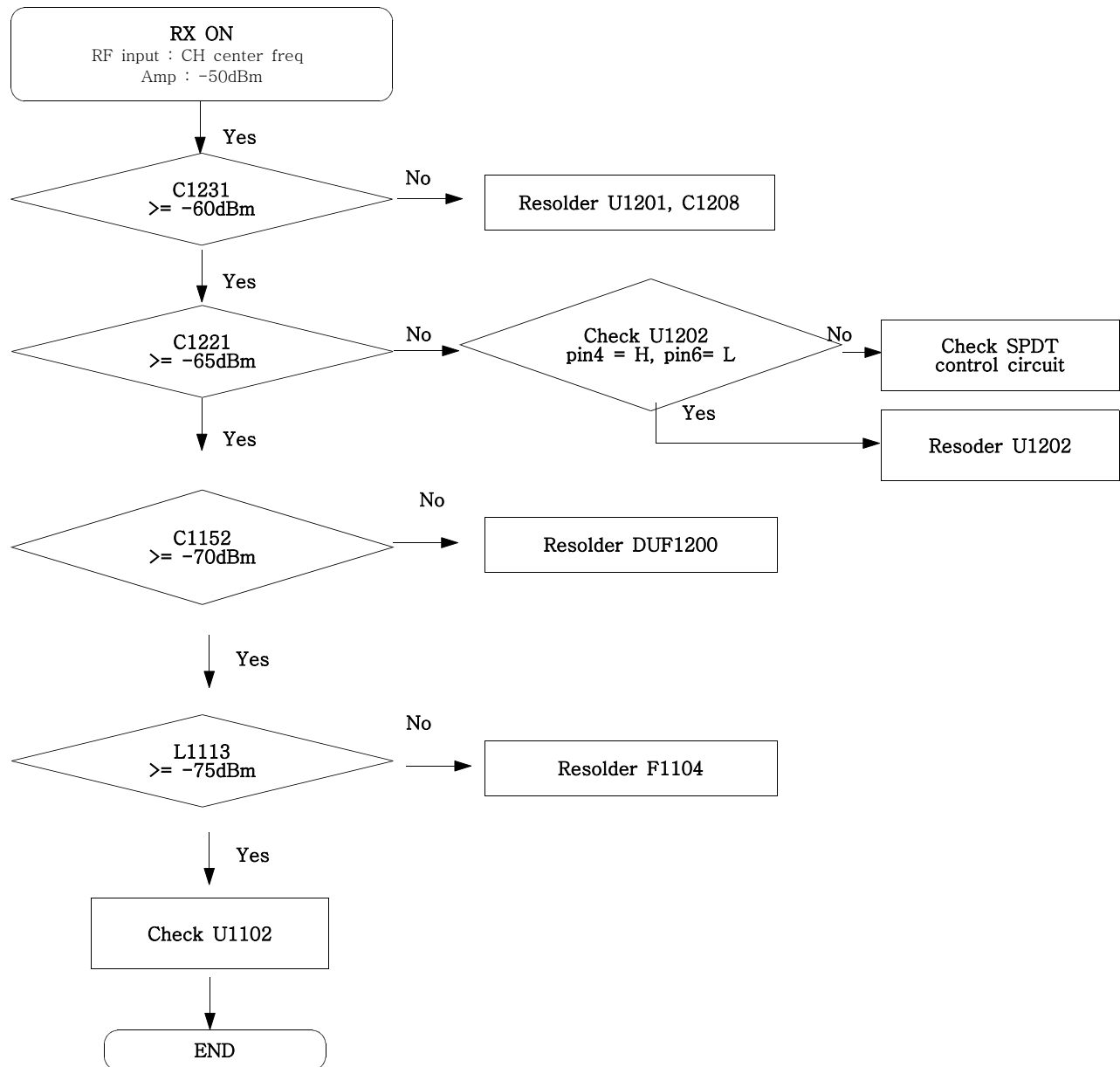
**CDMA/PCS mode**



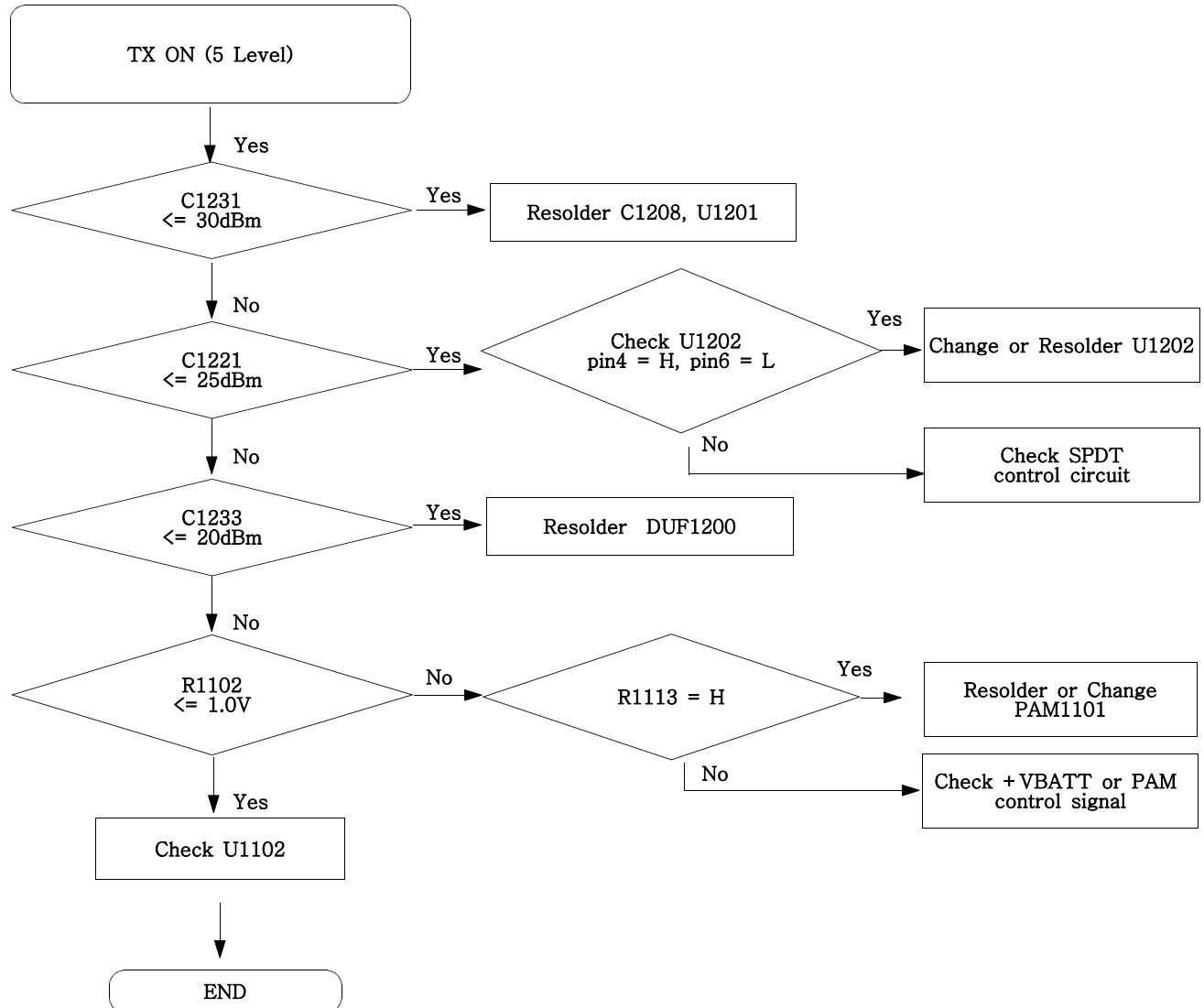


## 7-4. GSM/DCS

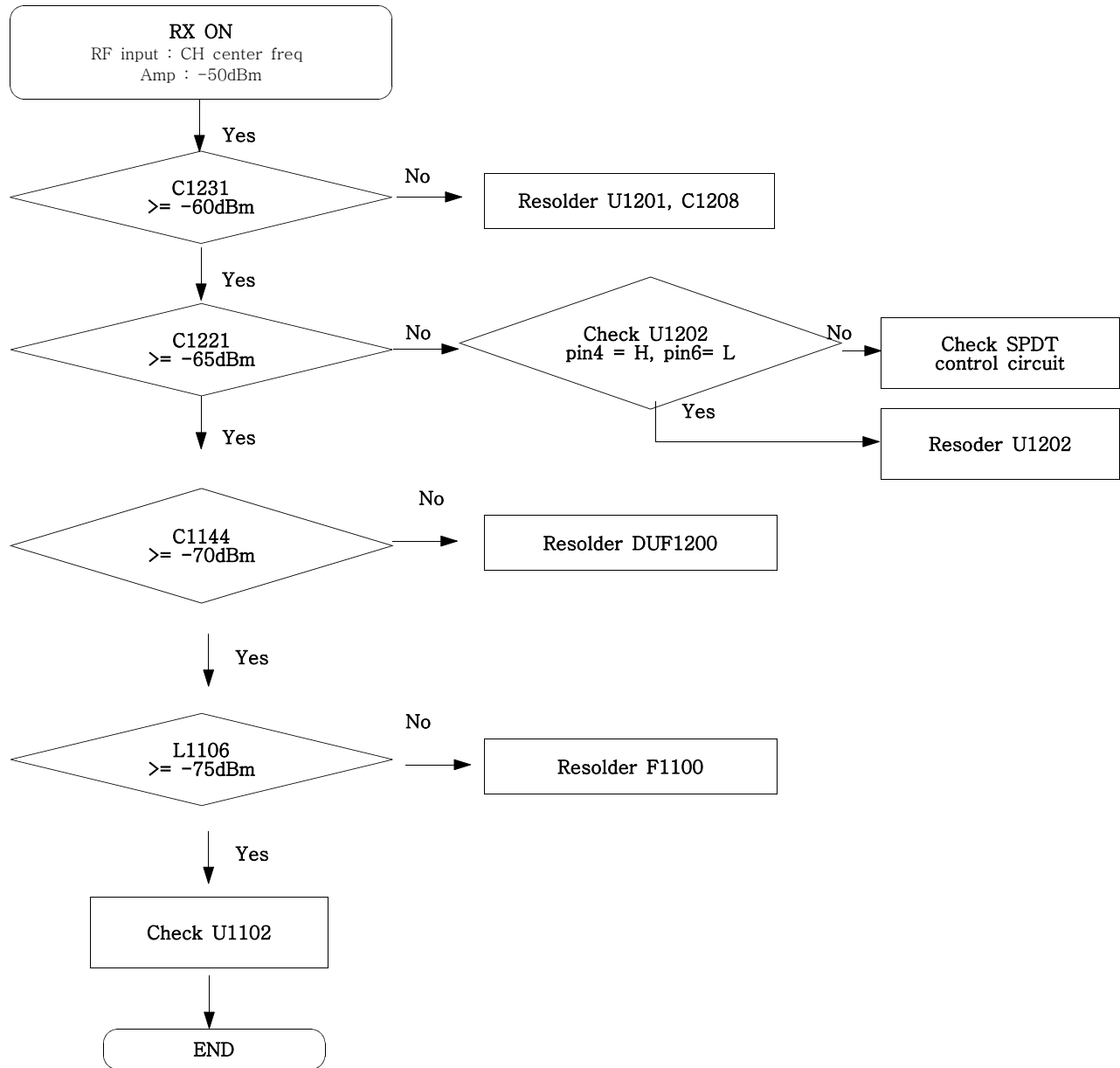
### 7-4-1. GSM Receiver



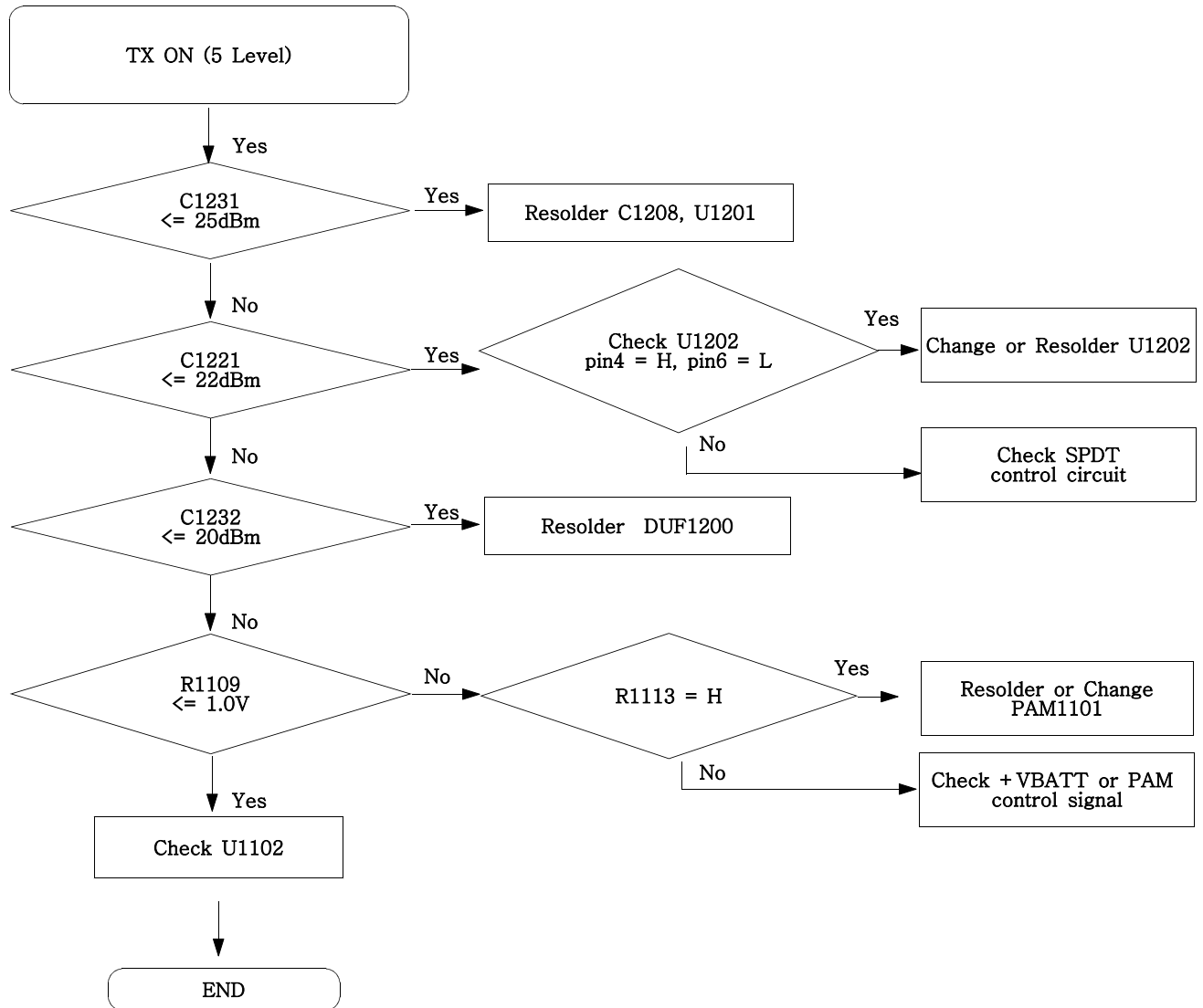
## 7-4-2. GSM Transmitter



### 7-4-3. DCS Receiver



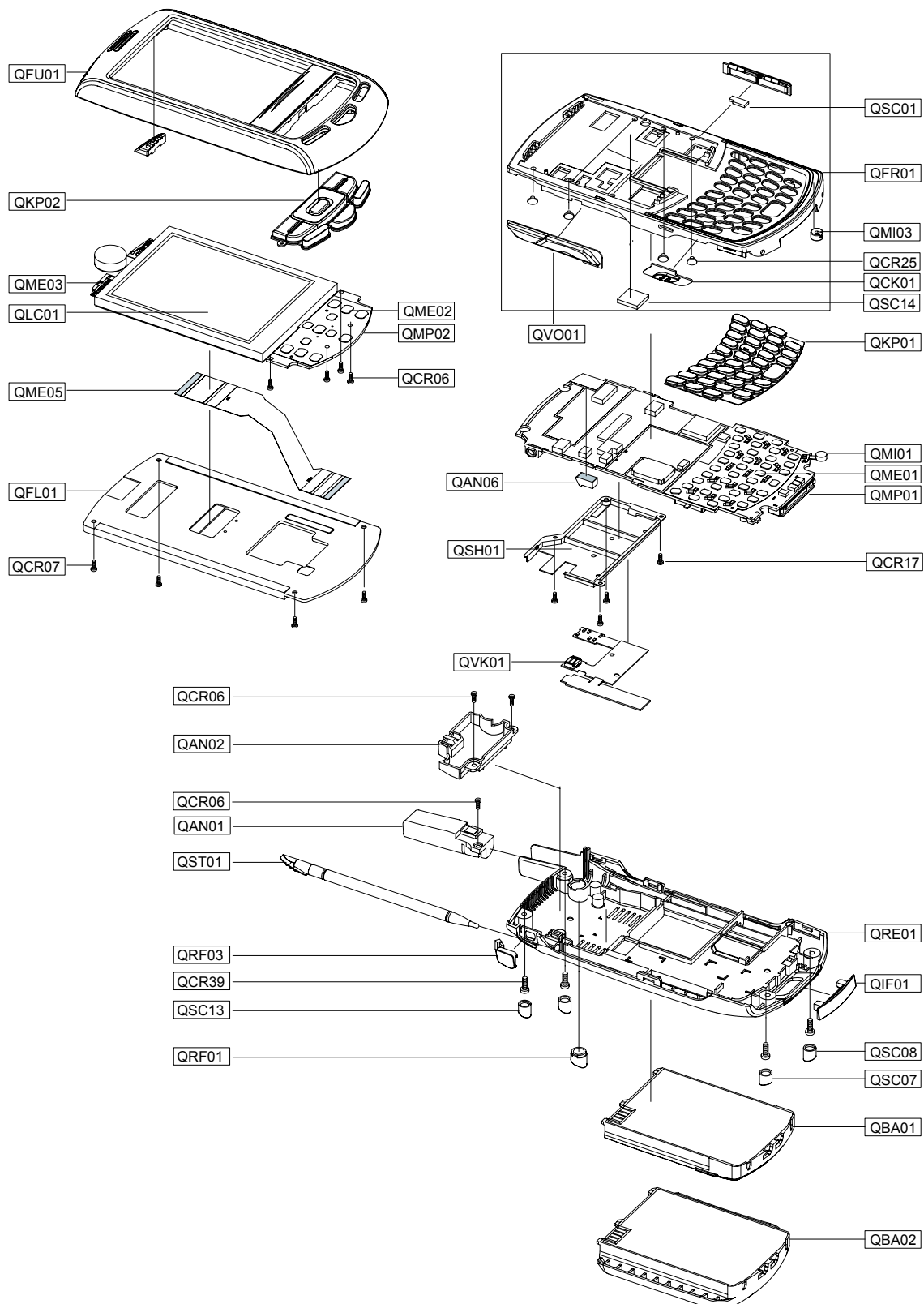


**7-4-4. DCS Transmitter**



## 8. Exploded View/Disassembly and Assembly Instructions

### 8-1. Exploded View



## 8-2. Parts list

| Location NO. |  | Description                   | SEC CODE    |
|--------------|--|-------------------------------|-------------|
| QAN01        |  | ANTENNA-SCHI730 BLACK         | GH42-00540A |
| QAN02        |  | INTENNA-SCHI830               | GH42-00643A |
| QAN06        |  | RMO-ANT CONTACT RUBBER        | GH73-03121A |
| QBA01        |  | BATTERY-1700MAH,ENG,MGRAY,M   | GH43-02518A |
| QBA02        |  | BATTERY-1100MAH,ENG,MGRAY,M   | GH43-02529A |
| QCK01        |  | PMO-SWITCH KEY                | GH72-20053A |
| QCR06        |  | SCREW-MACHINE                 | 6001-001155 |
| QCR06        |  | SCREW-MACHINE                 | 6001-001155 |
| QCR07        |  | SCREW-MACHINE                 | 6001-001691 |
| QCR17        |  | SCREW-MACHINE                 | 6001-001460 |
| QCR25        |  | SCREW-MACHINE                 | 6001-001893 |
| QCR39        |  | SCREW-MACHINE                 | 6001-001606 |
| QFL01        |  | ASSY MEC-SLIDE LOWER          | GH75-04632A |
| QFR01        |  | ASSY MEC-FRONT COVER          | GH75-06385A |
| QFU01        |  | ASSY CASE-SLIDE UPPER(SPRINT) | GH98-01434A |
| QIF01        |  | RMO-IF COVER                  | GH73-04597A |
| QKP01        |  | ASSY MEC-KEY QWERTY           | GH75-06486A |
| QKP02        |  | ASSY KEYPAD-SUB(SPR/SIL)      | GH98-01437A |
| QLC01        |  | LCD-SCHI730 LCD               | GH07-00574A |
| QME01        |  | UNIT-METAL DOME(MAIN)         | GH59-02233A |
| QME02        |  | UNIT-METAL DOME(SUB)          | GH59-02177A |
| QME03        |  | UNIT-TOP FPC ASSY             | GH59-02458A |
| QME05        |  | MEA-SLID FPCB KIT             | GH97-05290A |
| QMI01        |  | MICROPHONE-ASSY               | GH30-00132A |
| QMI03        |  | RMO-MIC RUBBER                | GH73-03120A |
| QMP01        |  | PBA MAIN-SCHI830 SPRINT       | GH92-02816A |
| QMP02        |  | PBA MAIN-SCHI830 SPRINT SUB   | GH92-02829A |
| QRE01        |  | ASSY MEC-REAR COVER           | GH75-06386A |
| QRF01        |  | RMO-RF COVER                  | GH73-04596A |
| QRF03        |  | PMO-EAR COVER                 | GH72-20918A |
| QSC01        |  | RMO-RUBBER SD DOOR            | GH73-04860A |
| QSC07        |  | RMO-SCREW CAP BOTTOM(L)       | GH73-03372A |
| QSC08        |  | RMO-SCREW CAP BOTTOM(R)       | GH73-03373A |
| QSC13        |  | RMO-RUBBER SCREW CAP UP       | GH73-04247A |
| QSC14        |  | RMO-RUBBER FRONT 2            | GH73-05101A |
| QSH01        |  | ASSY MEC-SHIELD CAN           | GH75-07290A |
| QST01        |  | ASSY MEC-STYLUS               | GH75-06210A |
| QVK01        |  | UNIT-SIDE FPCB                | GH59-02295A |
| QVO01        |  | ASSY MEC-VOLUME KEY           | GH75-06488A |

| <b>Description</b>             | <b>SEC CODE</b> |
|--------------------------------|-----------------|
| PLUG-CONVERSION                | 3721-001057     |
| PLUG-CONVERSION                | 3721-001077     |
| ANTENNA-CHIP                   | 4202-001040     |
| BAG PE                         | 6902-000297     |
| BAG PE                         | 6902-000461     |
| BAG PE                         | 6902-000643     |
| CBF INTERFACE-PC DATA LINK CAB | GH39-00567A     |
| CHARGER-TRAVEL CHARGER         | GH44-00933A     |
| S/W CD-SCH-I830 MPROJECTOR 2.0 | GH46-00311A     |
| UNIT-EARPHONE                  | GH59-01538A     |
| UNIT-SIM CARD                  | GH59-03667A     |
| LABEL(P)-GUIDE(SPRINT)         | GH68-02023A     |
| LABEL(P)-WATER SOAK            | GH68-02026A     |
| LABEL-MAIN(STR)                | GH68-06548B     |
| LABEL(R)-MAIN(SER CKD)         | GH68-10705D     |
| MANUAL USERS-NOA ENGLISH       | GH68-11558A     |
| MANUAL USERS-NOA ENGLISH       | GH68-12202A     |
| MANUAL USERS-NOA ENGLISH       | GH68-12260A     |
| BOX-UNIT(STR)                  | GH69-02742B     |
| CUSHION-CASE MAIN(VER)         | GH69-03365A     |
| RMO-RUBBER REAR 4              | GH73-05481A     |
| MPR-TAPE LCD 1                 | GH74-13066A     |
| MPR-TAPE LCD 3                 | GH74-13068A     |
| MPR-BOHO VINYL LCD 1           | GH74-13069A     |
| MPR-VINYL BOHO OTA(SPRINT)     | GH74-13264B     |
| MPR-GASKET FRONT 1             | GH74-15356A     |
| MPR-GASKET FRONT 2             | GH74-15357A     |
| MPR-TAPE FRONT                 | GH74-15360A     |
| MPR-FLEX SUPPRESSOR            | GH74-15939A     |
| MPR-BOHO VINYL KEY             | GH74-16032A     |
| MPR-FRONT GASKET 3             | GH74-16583A     |
| MPR-PCB GASKET 2               | GH74-16585A     |
| MPR-TAPE MAIN ACTUATOR         | GH74-17682A     |
| MPR-TAPE SUB ACTUATOR B        | GH74-17683A     |
| MPR-TAPE SUB ACTUATOR G        | GH74-17684A     |
| MPR-TAPE MAIN BASE             | GH74-17686A     |
| MPR-TAPE EAR                   | GH74-19716A     |

8-3. DM Cable(GH39-00272A)



8-4. Test JiG



8-5. RF Cable(GH39-00105A)

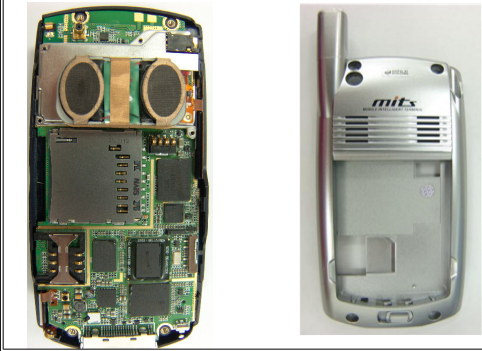
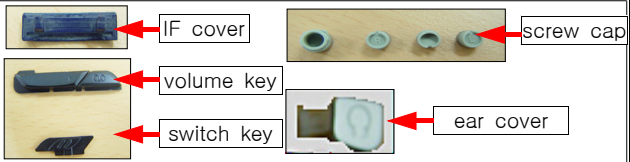
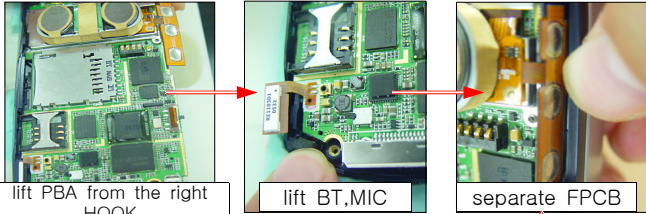
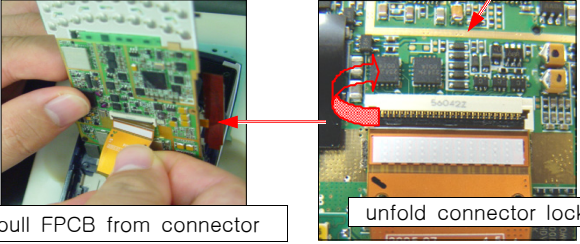
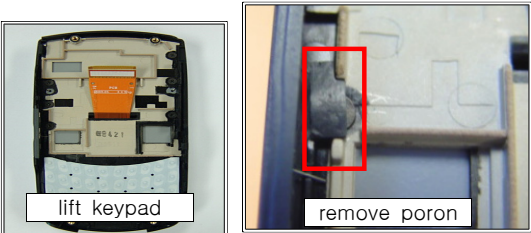
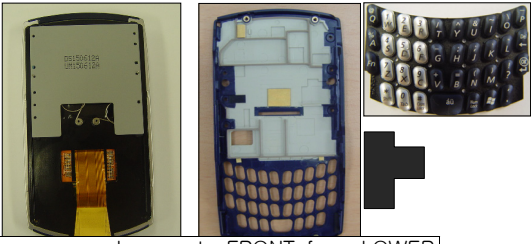
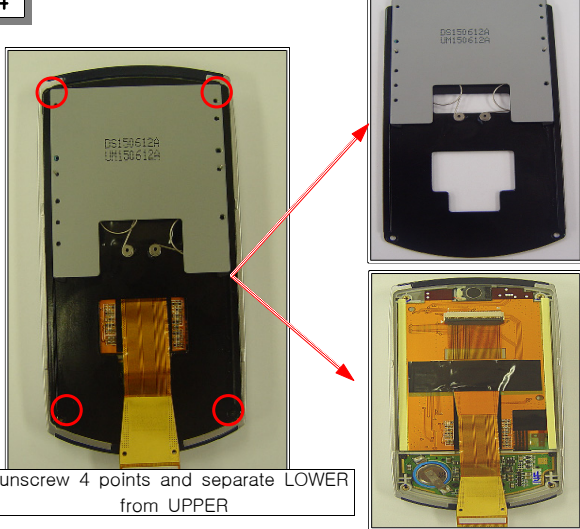


8-6. Test Jig Cable(GH39-00122A)

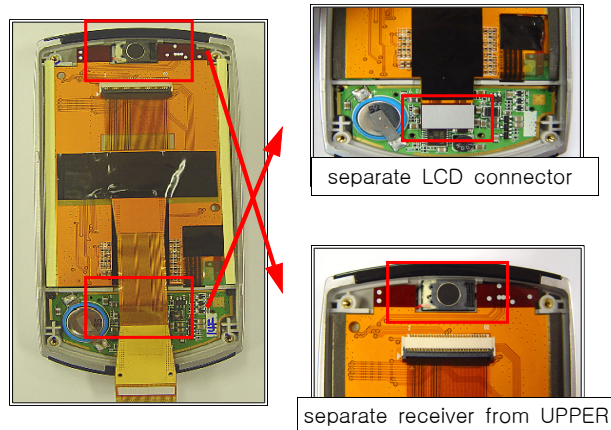




## 8-7. Disassembly

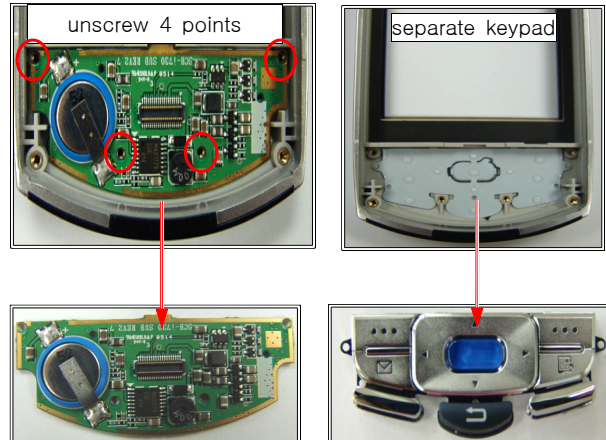
|   |   |
|---|---|
| <p><b>1</b></p>   <p>IF cover<br/>volume key<br/>switch key<br/>screw cap<br/>ear cover</p> <ol style="list-style-type: none"> <li>1.remove screw caps and unscrew 4 points</li> <li>2.separate REAR from SET (start from lower side HOOK)</li> <li>3.separate side key,switch key,ear cover and IF cover from SET</li> </ol> | <p><b>2</b></p>  <p>lift PBA from the right HOOK<br/>lift BT,MIC<br/>separate FPCB</p>  <p>pull FPCB from connector<br/>unfold connector lock</p> <ol style="list-style-type: none"> <li>1.lift PBA from right HOOK</li> <li>2.separate BT antenna,MIC,FPCB from FRONT</li> <li>3.open connector lock and separate FPCB from PBA</li> </ol> |
| <p>※ Caution</p> <ol style="list-style-type: none"> <li>1. be careful not to break HOOK or bend REAR</li> <li>2. be careful not to leave finger print on the antenna contact</li> </ol>   | <p>※ Caution</p> <ol style="list-style-type: none"> <li>1. keep FPCB CONN clean and undamaged</li> <li>2. be careful not to damage any component on PBA while separating PBA from FRONT</li> <li>3. avoid using too sharp tweezers</li> </ol>   |
| <p><b>3</b></p>  <p>lift keypad<br/>remove poron</p>  <p>unscrew and separate FRONT from LOWER</p> <ol style="list-style-type: none"> <li>1.separate keypad form FRONT</li> <li>2.remove poron covering screw</li> <li>3.unscrew 6 points and separate FRONT from lower</li> </ol>  | <p><b>4</b></p>  <p>unscrew 4 points and separate LOWER from UPPER</p> <ol style="list-style-type: none"> <li>1.unscrew 4 points</li> <li>2.separate LOWER from UPPER</li> </ol>  |
| <p>※ Caution</p> <ol style="list-style-type: none"> <li>1. be careful not to scratch FRONT while removing PORON by using sharp tweezers</li> <li>2. keep FPCB undamaged while separating REAR from FRONT</li> </ol>   | <p>※ Caution</p> <ol style="list-style-type: none"> <li>1. keep FPCB CONN clean and undamaged</li> <li>2. be careful not to damage any component on PBA while separating PBA from FRONT</li> <li>3. avoid using too sharp tweezers</li> </ol>   |

5



1. separate LCD connector from SUB PBA
2. separate receiver from UPPER

6



1. unscrew 4 points and separate SUB PBA from UPPER.
2. separate sub key pad

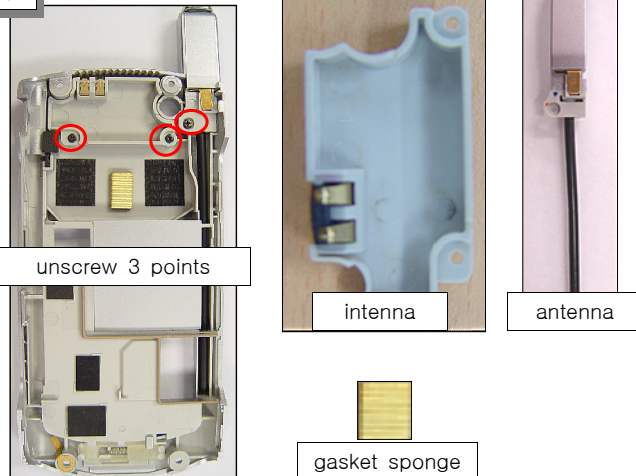
## ※ Caution

1. be careful not to scratch FRONT while removing receiver by using sharp tweezers
2. keep connector clean and undamaged

## ※ Caution

1. be careful not to give excessive pressure while separating SUB PBA
2. be careful not to scratch any component on the PBA by sharp tweezers' end

7



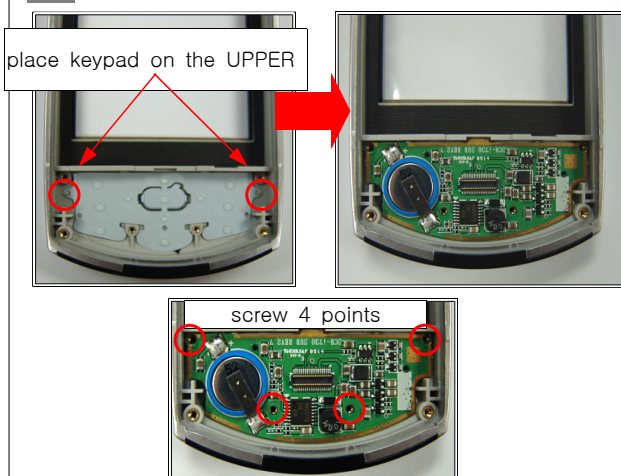
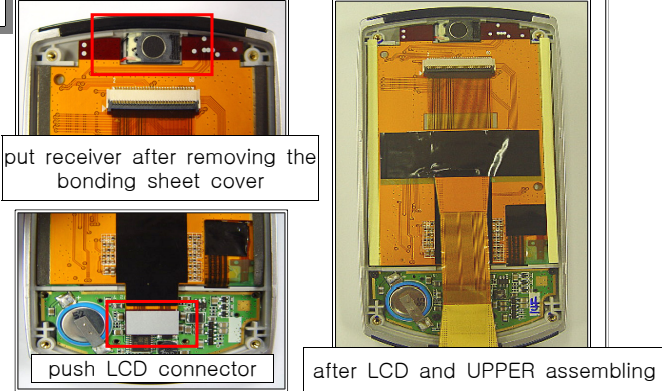
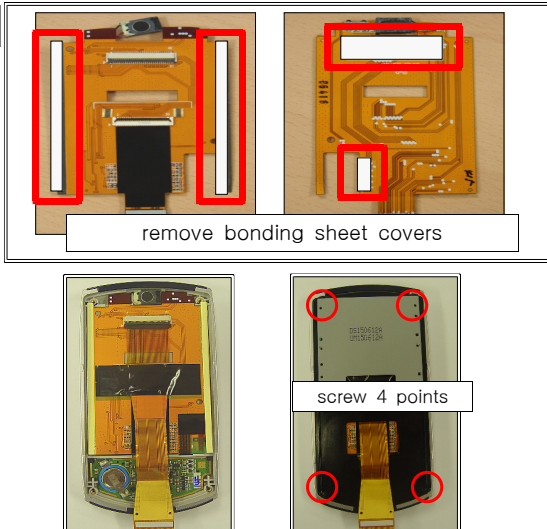
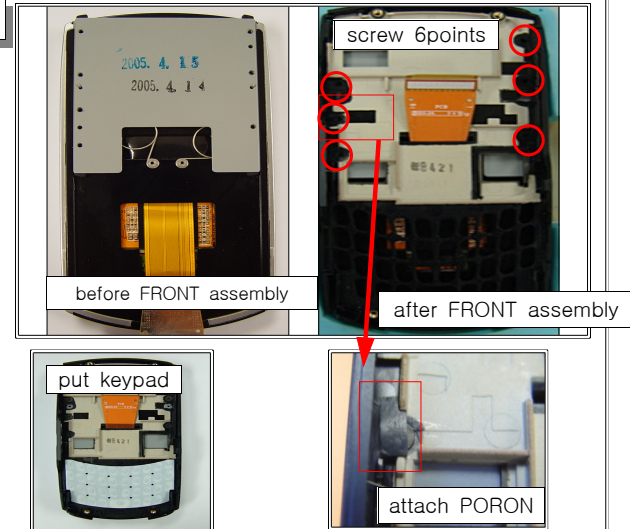
1. unscrew 3 points
2. separate intenna from REAR
3. separating antenna from REAR by pulling antenna's upper par .

## ※ Caution

1. be careful not to leave finger print on the antenna/intenna contact
2. be careful not to bend tube while separating antenna.



## 8-8. Assembly

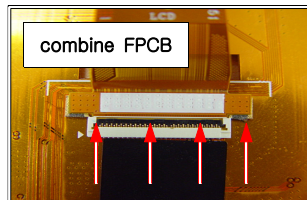
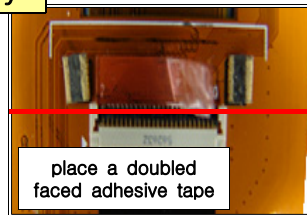
|  |  |
|--|--|
| <p><b>1</b></p>  <p>place keypad on the UPPER</p> <p>screw 4 points</p> <ol style="list-style-type: none"> <li>1.place sub keypad onto the Upper</li> <li>2.place sub PBA onto the Upper</li> <li>3.screw 4 points</li> </ol>                         | <p><b>2</b></p>  <p>put receiver after removing the bonding sheet cover</p> <p>push LCD connector</p> <p>after LCD and UPPER assembling</p> <ol style="list-style-type: none"> <li>1. after removing bonding sheet cover, put the receiver onto UPPER</li> <li>2. combine LCD and UPPER by pushing the center spot of LCD connector</li> </ol> |
| <p><b>* Caution</b></p> <ol style="list-style-type: none"> <li>1. make sure it's i830's keypad</li> <li>2. Check DOME SHEET attachment onto PBA</li> <li>3. screw every point</li> </ol>   | <p><b>* Caution</b></p> <ol style="list-style-type: none"> <li>1. grip the sides of LCD panel while assembling</li> <li>2. make sure LCD connector is firmly fixed</li> </ol>  |
| <p><b>3</b></p>  <p>remove bonding sheet covers</p> <p>screw 4 points</p> <ol style="list-style-type: none"> <li>1.remove bonding sheet covers in FPCB</li> <li>2.assemble LOWER by passing FPCB through LOWER</li> <li>3.screw 4 points</li> </ol> | <p><b>4</b></p>  <p>before FRONT assembly</p> <p>screw 6points</p> <p>put keypad</p> <p>attach PORON</p> <ol style="list-style-type: none"> <li>1.pass FPCB through FRONT</li> <li>2.screw 6 points</li> <li>3.attach PORON and put keypad onto FRONT</li> </ol>   |
| <p><b>* Caution</b></p> <ol style="list-style-type: none"> <li>1. make sure it's i830's keypad</li> <li>2. Check DOME SHEET attachment onto PBA</li> <li>3. screw every point</li> </ol>   | <p><b>* Caution</b></p> <ol style="list-style-type: none"> <li>1. be careful not to damage FPCB</li> <li>2. check shielding walls in the FRONT</li> </ol>  |

|  |   |
|--|---|
| <div data-bbox="162 199 211 241">5</div> <div data-bbox="219 199 479 409">  <p>unfold connector lock</p> </div> <div data-bbox="487 199 803 409">  <p>slide FPCB into connector lock</p> </div> <div data-bbox="219 430 479 703">  <p>press FPCB over an adhesive tape</p> </div> <div data-bbox="487 430 803 703">  <p>close connector lock</p> </div> <div data-bbox="162 724 803 861"> <ol style="list-style-type: none"> <li>1.remove the cover of an adhesive tpae and unfold connector lock</li> <li>2.slide FPCB into connector lock until the white line on the FPCB meets connector</li> <li>3.press FPCB over an adhesive tape and close connector lock</li> </ol> </div>  | <div data-bbox="828 199 876 241">6</div> <div data-bbox="828 241 998 430">  <p>place BT,mike</p> </div> <div data-bbox="1006 241 1209 430">  <p>place PBA</p> </div> <div data-bbox="1218 241 1437 430">  <p>fix FPCB</p> </div> <div data-bbox="828 451 998 703">  <p>switch key</p> </div> <div data-bbox="1006 451 1209 703">  <p>place volume key</p> </div> <div data-bbox="1218 451 1437 703">  <p>place switch</p> </div> <div data-bbox="828 724 1461 861"> <ol style="list-style-type: none"> <li>1.place BT antenna and mic onto FRONT</li> <li>2.place PBA onto FRONT</li> <li>2.fix FPCB at FRONT than put volume key and switch key into FRONT</li> </ol> </div> |
| <div data-bbox="162 882 292 913">※ Caution</div> <ol style="list-style-type: none"> <li>1. be careful not to damage FPCB</li> <li>2. be careful not to damage connector lock</li> <li>3. confirm FPCB is fully inserted into connector lock</li> </ol>   | <div data-bbox="828 882 958 913">※ Caution</div> <ol style="list-style-type: none"> <li>1. Be careful not to tear down FPCB</li> <li>2. when assembling side keys make sure it's in the right direction</li> </ol>  |
| <div data-bbox="162 1060 211 1102">7</div> <div data-bbox="162 1081 373 1270">  <p>put ear-cover</p> </div> <div data-bbox="381 1081 592 1270">  <p>start assembly by pressing antenna spot</p> </div> <div data-bbox="600 1081 812 1270">  <p>then press the lower side of antenna</p> </div> <div data-bbox="162 1281 373 1501">  <p>press spot near the side key</p> </div> <div data-bbox="381 1281 592 1501">  <p>press spot near the ear jack</p> </div> <div data-bbox="162 1585 803 1722"> <ol style="list-style-type: none"> <li>1.put ear-cover into REAR</li> <li>2.at first press antenna spot to combine FRONT with REAR</li> <li>3.assemble FRONT and REAR by order described on the pictures</li> </ol> </div> | <div data-bbox="828 1060 876 1102">8</div> <div data-bbox="828 1081 1079 1396">  <p>screw 4 points</p> </div> <div data-bbox="828 1407 1079 1585">  </div> <div data-bbox="1104 1081 1461 1543">  </div> <div data-bbox="828 1585 1461 1722"> <ol style="list-style-type: none"> <li>1.screw 4 points</li> <li>2. while inserting IF cover, make sure it's in the right direction</li> <li>3.before inserting screw cap ,check direction mark inside the cap</li> </ol> </div>   |
| <div data-bbox="162 1743 292 1774">※ Caution</div> <ol style="list-style-type: none"> <li>1. confirm keys are placed on the right place</li> <li>2. be careful not to give excessive pressure while assembling FRONT and REAR</li> <li>3. make sure there is no openings between FRONT and REAR</li> </ol>   | <div data-bbox="828 1743 958 1774">※ Caution</div> <ol style="list-style-type: none"> <li>1. when inserting covers, use urethane form JIG</li> <li>2. be careful not to make any scratch while assembling FRONT and REAR</li> </ol>   |

## 8-9. LCD KIT Assembly & Disassembly

### LCD Assembly

1

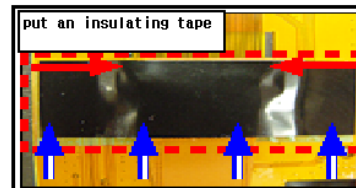
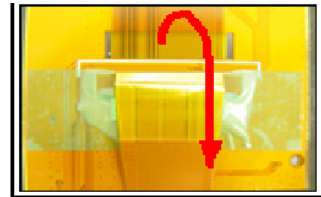


- 1.remove the transparent cover on the gasket tape
- 2.place a double faced adhesive tape on the front of the connector in parallel with the guide line.
- 3.remove the cover of a double faced adhesive tape
- 4.push SLIDE FPCB into TOP FPCB's connector until the white guide line meets connector
- 5.press SLIDE FPCB over the adhesive tape

#### ※ Caution

1. there should be no adhesive agent on the Connector
2. make sure the FPCB is completely locked to the connector .

2

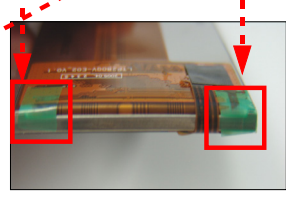
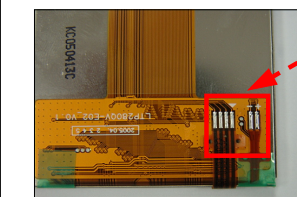
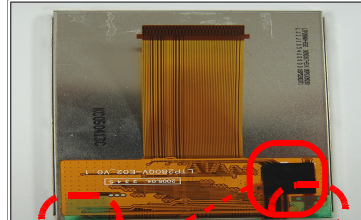
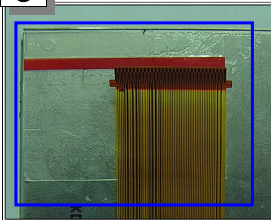


- 1.place a green colored insulating tape over connector belong the guide line
- 2.fold FPCB downward
- 3.align a black colored insulating tape along the guide line of TOP FPCB and put it onto a green colored insulating tape

#### ※ Caution

1. make sure the FPCB and connector are completely bonded
2. place the adhesive tape along the guide line and make sure no vapor in the bonding part .

3

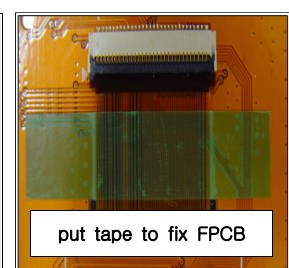
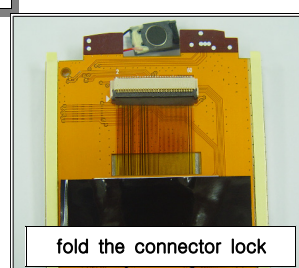


- 1.remove the transparent cover which protects FPCB on the LCD panel
- 2.cover LCD TSP soldered place with an insulating tape.
- 3.cover the two places which are described in the photo with tape to prevent moisture inflow

#### ※ Caution

1. use tools carefully not to scratch LCD panel
2. when lifting the LCD panel ,grab the sides of LCD panel

4

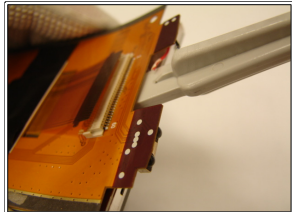


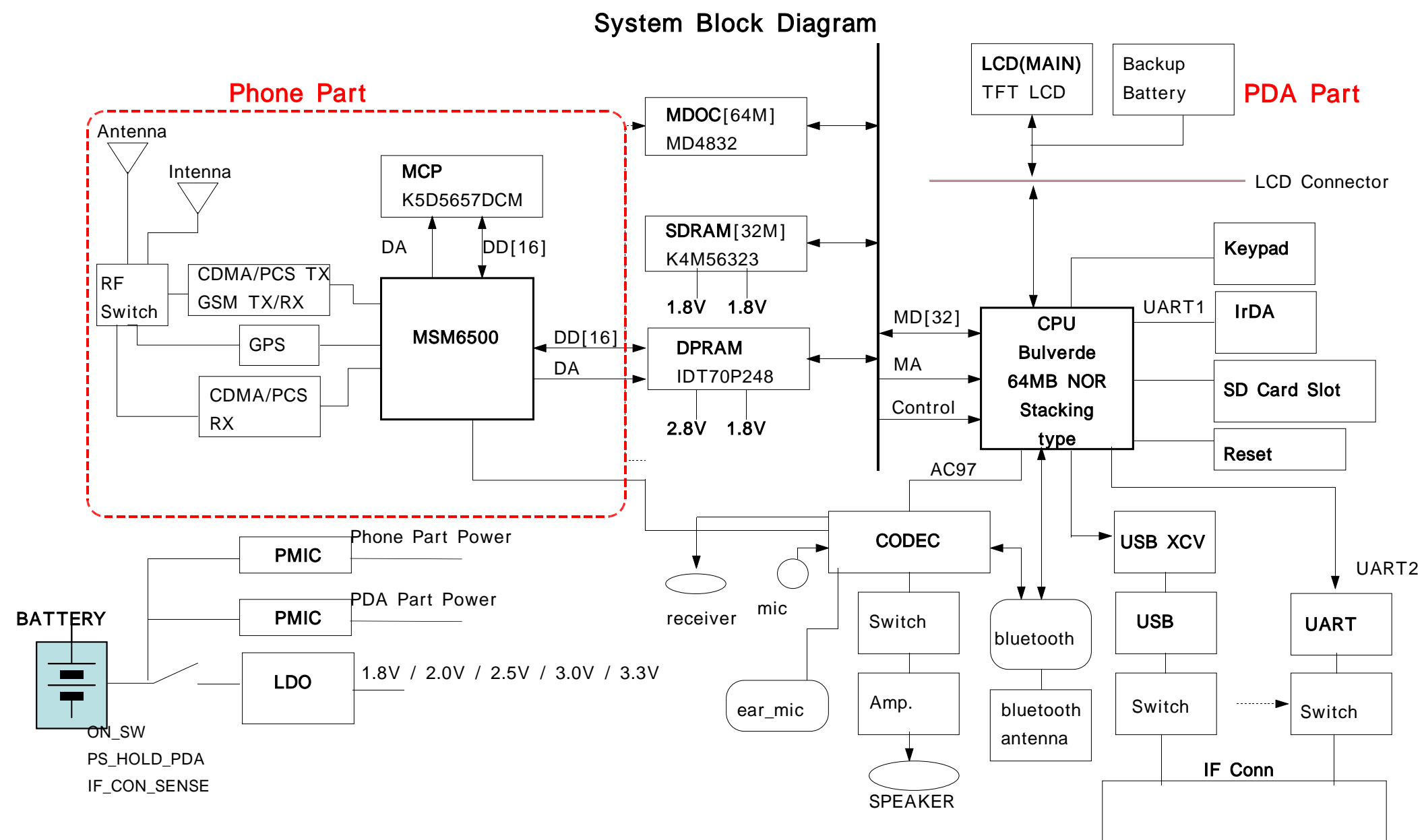
- 1.push the FPCB until the end of FPCB is completely inserted into connector lock and shut down the lock
- 2.remove LCD cover and place TOP FPCB onto LCD panel
- 3.put the tape in parallel to guide line at the end of FPCB bond

#### ※ Cautions

- 1.be careful not to give any stress to FPCB
- 2.when lifting the LCD panel ,grab the sides of LCD panel



|  |   |
|--|---|
| <div data-bbox="162 189 449 237"> <div>1</div> <div>LCD Disassembly</div> </div> <div data-bbox="159 247 431 510">  <div>remove FPCB bonding tape</div> </div> <div data-bbox="461 247 761 510">  <div>unlocked the connector</div> </div> <div data-bbox="159 520 448 730">  </div> <div data-bbox="475 520 748 730">  <div>after disassembly</div> </div> <div data-bbox="167 766 667 844"> <ol style="list-style-type: none"> <li>1. remove FPCB bonding tape</li> <li>2. unlocked the connector and pull out the FPCB</li> <li>3. separate FPCB from LCD panel</li> </ol> </div> |   |
| <div data-bbox="162 856 303 890"> <div>※ Caution</div> </div> <ol style="list-style-type: none"> <li>1. use tools carefully not to scratch LCD panel</li> <li>2. when lifting the LCD panel ,grab the sides of LCD panel</li> </ol>  | <div data-bbox="824 856 977 890"> <div>※ Cautions</div> </div> <ol style="list-style-type: none"> <li>1. be careful not to give any stress to FPCB</li> <li>2. when lifting the LCD panel ,grab the sides of LCD panel</li> </ol> |



## 10. Electrical Parts List

| Design LOC | Description     | SEC CODE    | STATUS |
|------------|-----------------|-------------|--------|
| ANT1       | NPR-CONTACT ANT | GH71-00734A | SA     |
| BAT30      | BATTERY-LI(2ND) | 4302-001176 | SA     |
| BTC40      | HEADER-BATTERY  | 3711-006035 | SA     |
| C1000      | C-CER,CHIP      | 2203-005482 | SA     |
| C1000      | C-CER,CHIP      | 2203-006646 | SA     |
| C1001      | C-CER,CHIP      | 2203-006646 | SA     |
| C1002      | C-CER,CHIP      | 2203-000995 | SA     |
| C1002      | C-CER,CHIP      | 2203-006646 | SA     |
| C1003      | C-CER,CHIP      | 2203-006646 | SA     |
| C1004      | C-CER,CHIP      | 2203-000233 | SA     |
| C1004      | C-CER,CHIP      | 2203-002443 | SA     |
| C1005      | C-CER,CHIP      | 2203-000233 | SA     |
| C1005      | C-CER,CHIP      | 2203-001598 | SA     |
| C1006      | C-CER,CHIP      | 2203-000233 | SA     |
| C1006      | C-CER,CHIP      | 2203-005664 | SA     |
| C1007      | C-CER,CHIP      | 2203-001598 | SA     |
| C1007      | C-CER,CHIP      | 2203-005382 | SA     |
| C1008      | C-CER,CHIP      | 2203-000438 | SA     |
| C1008      | C-CER,CHIP      | 2203-006646 | SA     |
| C1009      | C-CER,CHIP      | 2203-005061 | SA     |
| C1010      | C-CER,CHIP      | 2203-005065 | SA     |
| C1011      | C-CER,CHIP      | 2203-005382 | SA     |
| C1011      | C-CER,CHIP      | 2203-006307 | SA     |
| C1012      | C-CER,CHIP      | 2203-000438 | SA     |
| C1012      | C-CER,CHIP      | 2203-006307 | SA     |
| C1013      | C-CER,CHIP      | 2203-005482 | SA     |
| C1013      | C-CER,CHIP      | 2203-005552 | SA     |
| C1014      | C-CER,CHIP      | 2203-000438 | SA     |
| C1014      | C-CER,CHIP      | 2203-006307 | SA     |
| C1015      | C-CER,CHIP      | 2203-000438 | SA     |
| C1015      | C-CER,CHIP      | 2203-005482 | SA     |
| C1016      | C-CER,CHIP      | 2203-005061 | SA     |
| C1016      | C-CER,CHIP      | 2203-006307 | SA     |
| C1017      | C-CER,CHIP      | 2203-006307 | SA     |
| C1018      | C-CER,CHIP      | 2203-000233 | SA     |
| C1019      | C-CER,CHIP      | 2203-006646 | SA     |
| C1020      | C-CER,CHIP      | 2203-000233 | SA     |
| C1021      | C-CER,CHIP      | 2203-005061 | SA     |
| C1021      | C-CER,CHIP      | 2203-005552 | SA     |
| C1022      | C-CER,CHIP      | 2203-000438 | SA     |
| C1022      | C-CER,CHIP      | 2203-006646 | SA     |
| C1023      | C-CER,CHIP      | 2203-000233 | SA     |
| C1023      | C-CER,CHIP      | 2203-006646 | SA     |
| C1024      | C-CER,CHIP      | 2203-000233 | SA     |
| C1025      | C-CER,CHIP      | 2203-005482 | SA     |
| C1026      | C-CER,CHIP      | 2203-005482 | SA     |
| C1027      | C-CER,CHIP      | 2203-005736 | SA     |
| C1028      | C-CER,CHIP      | 2203-000995 | SA     |
| C1029      | C-CER,CHIP      | 2203-005061 | SA     |
| C1031      | C-CER,CHIP      | 2203-000995 | SA     |

## Electrical Parts List

| Design LOC | Description    | SEC CODE    | STATUS |
|------------|----------------|-------------|--------|
| C1032      | C-CER,CHIP     | 2203-000995 | SA     |
| C1033      | C-CER,CHIP     | 2203-000278 | SA     |
| C1034      | C-CER,CHIP     | 2203-005482 | SA     |
| C1035      | C-CER,CHIP     | 2203-005482 | SA     |
| C1036      | C-CER,CHIP     | 2203-006646 | SA     |
| C1037      | C-CER,CHIP     | 2203-005061 | SA     |
| C1038      | C-CER,CHIP     | 2203-000995 | SA     |
| C1039      | C-CER,CHIP     | 2203-005552 | SA     |
| C1040      | C-CER,CHIP     | 2203-005393 | SA     |
| C1042      | C-CER,CHIP     | 2203-000254 | SA     |
| C1043      | C-CER,CHIP     | 2203-000254 | SA     |
| C1044      | C-CER,CHIP     | 2203-000254 | SA     |
| C1045      | C-CER,CHIP     | 2203-005061 | SA     |
| C1046      | C-CER,CHIP     | 2203-000585 | SA     |
| C1047      | C-FILM,SMD-PPS | 2301-001213 | SA     |
| C1048      | C-CER,CHIP     | 2203-001124 | SNA    |
| C1049      | C-CER,CHIP     | 2203-005482 | SA     |
| C1050      | C-CER,CHIP     | 2203-006201 | SA     |
| C1051      | C-CER,CHIP     | 2203-000254 | SA     |
| C1052      | C-CER,CHIP     | 2203-000254 | SA     |
| C1053      | C-CER,CHIP     | 2203-000233 | SA     |
| C1101      | C-CER,CHIP     | 2203-000438 | SA     |
| C1102      | C-CER,CHIP     | 2203-005482 | SA     |
| C1103      | C-CER,CHIP     | 2203-005736 | SA     |
| C1104      | C-CER,CHIP     | 2203-005736 | SA     |
| C1105      | C-CER,CHIP     | 2203-005383 | SA     |
| C1106      | C-CER,CHIP     | 2203-005446 | SA     |
| C1107      | C-CER,CHIP     | 2203-000438 | SA     |
| C1108      | C-CER,CHIP     | 2203-000311 | SA     |
| C1109      | C-CER,CHIP     | 2203-001072 | SA     |
| C1110      | C-CER,CHIP     | 2203-000609 | SA     |
| C1112      | C-CER,CHIP     | 2203-000812 | SA     |
| C1114      | C-CER,CHIP     | 2203-000254 | SA     |
| C1115      | C-CER,CHIP     | 2203-005503 | SA     |
| C1116      | C-CER,CHIP     | 2203-005234 | SA     |
| C1117      | C-CER,CHIP     | 2203-006194 | SA     |
| C1118      | C-CER,CHIP     | 2203-006194 | SA     |
| C1119      | C-CER,CHIP     | 2203-006121 | SA     |
| C1120      | C-CER,CHIP     | 2203-006379 | SA     |
| C1121      | C-CER,CHIP     | 2203-002759 | SA     |
| C1123      | C-CER,CHIP     | 2203-006379 | SA     |
| C1124      | C-CER,CHIP     | 2203-006423 | SA     |
| C1125      | C-CER,CHIP     | 2203-000233 | SA     |
| C1126      | C-CER,CHIP     | 2203-006379 | SA     |
| C1127      | C-CER,CHIP     | 2203-000233 | SA     |
| C1128      | C-CER,CHIP     | 2203-001178 | SNA    |
| C1129      | C-CER,CHIP     | 2203-000233 | SA     |
| C1130      | C-CER,CHIP     | 2203-005736 | SA     |
| C1131      | C-CER,CHIP     | 2203-005806 | SNA    |
| C1133      | C-CER,CHIP     | 2203-005682 | SA     |

| Design LOC | Description | SEC CODE    | STATUS |
|------------|-------------|-------------|--------|
| C1134      | C-CER,CHIP  | 2203-006423 | SA     |
| C1135      | C-CER,CHIP  | 2203-000438 | SA     |
| C1138      | C-CER,CHIP  | 2203-002443 | SA     |
| C1139      | C-CER,CHIP  | 2203-000812 | SA     |
| C1140      | C-CER,CHIP  | 2203-002443 | SA     |
| C1141      | C-CER,CHIP  | 2203-000438 | SA     |
| C1142      | C-CER,CHIP  | 2203-002443 | SA     |
| C1143      | C-CER,CHIP  | 2203-000438 | SA     |
| C1144      | C-CER,CHIP  | 2203-000854 | SA     |
| C1145      | C-CER,CHIP  | 2203-000812 | SA     |
| C1146      | C-CER,CHIP  | 2203-000995 | SA     |
| C1147      | C-CER,CHIP  | 2203-005061 | SA     |
| C1148      | C-CER,CHIP  | 2203-000254 | SA     |
| C1149      | C-CER,CHIP  | 2203-006423 | SA     |
| C1151      | C-CER,CHIP  | 2203-000254 | SA     |
| C1152      | R-CHIP      | 2007-000171 | SA     |
| C1153      | C-CER,CHIP  | 2203-005725 | SA     |
| C1154      | C-CER,CHIP  | 2203-000233 | SA     |
| C1155      | C-CER,CHIP  | 2203-006141 | SA     |
| C1156      | C-CER,CHIP  | 2203-000438 | SA     |
| C1157      | C-CER,CHIP  | 2203-000438 | SA     |
| C1158      | C-CER,CHIP  | 2203-002443 | SA     |
| C1159      | C-CER,CHIP  | 2203-006194 | SA     |
| C1160      | C-CER,CHIP  | 2203-005682 | SA     |
| C1161      | C-CER,CHIP  | 2203-005682 | SA     |
| C1162      | C-CER,CHIP  | 2203-000278 | SA     |
| C1163      | C-CER,CHIP  | 2203-001259 | SA     |
| C1164      | C-CER,CHIP  | 2203-000233 | SA     |
| C1165      | C-CER,CHIP  | 2203-000438 | SA     |
| C1166      | C-CER,CHIP  | 2203-000254 | SA     |
| C1169      | C-CER,CHIP  | 2203-000438 | SA     |
| C1170      | C-CER,CHIP  | 2203-005682 | SA     |
| C1171      | C-CER,CHIP  | 2203-006423 | SA     |
| C1172      | C-CER,CHIP  | 2203-006423 | SA     |
| C1173      | C-CER,CHIP  | 2203-005682 | SA     |
| C1174      | C-CER,CHIP  | 2203-006423 | SA     |
| C1175      | C-CER,CHIP  | 2203-005682 | SA     |
| C1176      | C-CER,CHIP  | 2203-006423 | SA     |
| C1177      | C-CER,CHIP  | 2203-001033 | SA     |
| C1178      | C-CER,CHIP  | 2203-000940 | SA     |
| C1180      | C-CER,CHIP  | 2203-005061 | SA     |
| C1182      | C-CER,CHIP  | 2203-001072 | SA     |
| C1183      | C-CER,CHIP  | 2203-000233 | SA     |
| C1200      | C-CER,CHIP  | 2203-005806 | SNA    |
| C1202      | C-CER,CHIP  | 2203-005736 | SA     |
| C1203      | C-CER,CHIP  | 2203-005736 | SA     |
| C1204      | C-CER,CHIP  | 2203-000278 | SA     |
| C1205      | C-CER,CHIP  | 2203-000233 | SA     |
| C1206      | C-CER,CHIP  | 2203-001072 | SA     |
| C1208      | C-CER,CHIP  | 2203-001072 | SA     |



## Electrical Parts List

| Design LOC | Description | SEC CODE    | STATUS |
|------------|-------------|-------------|--------|
| C1209      | C-CER,CHIP  | 2203-000233 | SA     |
| C1210      | C-CER,CHIP  | 2203-001072 | SA     |
| C1212      | C-CER,CHIP  | 2203-005736 | SA     |
| C1213      | C-CER,CHIP  | 2203-005736 | SA     |
| C1214      | C-CER,CHIP  | 2203-001072 | SA     |
| C1215      | C-CER,CHIP  | 2203-005736 | SA     |
| C1216      | C-CER,CHIP  | 2203-005736 | SA     |
| C1218      | C-CER,CHIP  | 2203-006562 | SA     |
| C1219      | C-CER,CHIP  | 2203-005736 | SA     |
| C1220      | C-CER,CHIP  | 2203-005736 | SA     |
| C1221      | C-CER,CHIP  | 2203-001072 | SA     |
| C1222      | C-CER,CHIP  | 2203-000386 | SA     |
| C1223      | C-CER,CHIP  | 2203-000386 | SA     |
| C1224      | C-CER,CHIP  | 2203-005736 | SA     |
| C1225      | C-CER,CHIP  | 2203-005736 | SA     |
| C1226      | C-CER,CHIP  | 2203-005482 | SA     |
| C1230      | C-CER,CHIP  | 2203-001072 | SA     |
| C1231      | C-CER,CHIP  | 2203-001072 | SA     |
| C1232      | C-CER,CHIP  | 2203-000386 | SA     |
| C1233      | C-CER,CHIP  | 2203-000233 | SA     |
| C200       | C-CER,CHIP  | 2203-005061 | SA     |
| C201       | C-CER,CHIP  | 2203-001437 | SA     |
| C202       | C-CER,CHIP  | 2203-000550 | SA     |
| C203       | C-CER,CHIP  | 2203-006562 | SA     |
| C204       | C-CER,CHIP  | 2203-005482 | SA     |
| C205       | C-CER,CHIP  | 2203-005482 | SA     |
| C206       | C-CER,CHIP  | 2203-005482 | SA     |
| C207       | C-CER,CHIP  | 2203-005482 | SA     |
| C208       | C-CER,CHIP  | 2203-006562 | SA     |
| C209       | C-CER,CHIP  | 2203-005482 | SA     |
| C211       | C-CER,CHIP  | 2203-005482 | SA     |
| C212       | C-CER,CHIP  | 2203-005482 | SA     |
| C213       | C-CER,CHIP  | 2203-005482 | SA     |
| C214       | C-CER,CHIP  | 2203-005482 | SA     |
| C215       | C-CER,CHIP  | 2203-005482 | SA     |
| C216       | C-CER,CHIP  | 2203-005482 | SA     |
| C217       | C-CER,CHIP  | 2203-006562 | SA     |
| C218       | C-CER,CHIP  | 2203-006562 | SA     |
| C219       | C-CER,CHIP  | 2203-005482 | SA     |
| C220       | C-CER,CHIP  | 2203-005482 | SA     |
| C221       | C-CER,CHIP  | 2203-006562 | SA     |
| C222       | C-CER,CHIP  | 2203-006562 | SA     |
| C223       | C-CER,CHIP  | 2203-005482 | SA     |
| C225       | C-CER,CHIP  | 2203-006562 | SA     |
| C226       | C-CER,CHIP  | 2203-005482 | SA     |
| C227       | C-CER,CHIP  | 2203-006562 | SA     |
| C228       | C-CER,CHIP  | 2203-005482 | SA     |
| C229       | C-CER,CHIP  | 2203-005482 | SA     |
| C230       | C-CER,CHIP  | 2203-005482 | SA     |
| C231       | C-CER,CHIP  | 2203-006562 | SA     |

| Design LOC | Description | SEC CODE    | STATUS |
|------------|-------------|-------------|--------|
| C232       | C-CER,CHIP  | 2203-005482 | SA     |
| C233       | C-CER,CHIP  | 2203-006562 | SA     |
| C234       | C-CER,CHIP  | 2203-006562 | SA     |
| C235       | C-CER,CHIP  | 2203-005482 | SA     |
| C236       | C-CER,CHIP  | 2203-005482 | SA     |
| C237       | C-CER,CHIP  | 2203-006562 | SA     |
| C238       | C-CER,CHIP  | 2203-005482 | SA     |
| C239       | C-CER,CHIP  | 2203-005482 | SA     |
| C240       | C-CER,CHIP  | 2203-005482 | SA     |
| C241       | C-CER,CHIP  | 2203-005482 | SA     |
| C242       | C-CER,CHIP  | 2203-006562 | SA     |
| C243       | C-CER,CHIP  | 2203-006562 | SA     |
| C244       | C-CER,CHIP  | 2203-006562 | SA     |
| C245       | C-CER,CHIP  | 2203-005482 | SA     |
| C246       | C-CER,CHIP  | 2203-005482 | SA     |
| C247       | C-CER,CHIP  | 2203-005061 | SA     |
| C248       | C-CER,CHIP  | 2203-006562 | SA     |
| C249       | C-CER,CHIP  | 2203-005482 | SA     |
| C250       | C-CER,CHIP  | 2203-005061 | SA     |
| C251       | C-CER,CHIP  | 2203-005061 | SA     |
| C254       | C-CER,CHIP  | 2203-005482 | SA     |
| C255       | C-CER,CHIP  | 2203-006562 | SA     |
| C256       | C-CER,CHIP  | 2203-005482 | SA     |
| C257       | C-CER,CHIP  | 2203-005482 | SA     |
| C260       | C-CER,CHIP  | 2203-006562 | SA     |
| C261       | C-CER,CHIP  | 2203-006626 | SA     |
| C262       | C-CER,CHIP  | 2203-005482 | SA     |
| C300       | C-CER,CHIP  | 2203-005061 | SA     |
| C301       | C-CER,CHIP  | 2203-005061 | SA     |
| C302       | C-CER,CHIP  | 2203-005065 | SA     |
| C303       | C-CER,CHIP  | 2203-005061 | SA     |
| C304       | C-CER,CHIP  | 2203-005061 | SA     |
| C305       | C-CER,CHIP  | 2203-006562 | SA     |
| C306       | C-CER,CHIP  | 2203-005061 | SA     |
| C307       | C-CER,CHIP  | 2203-005061 | SA     |
| C308       | C-CER,CHIP  | 2203-005065 | SA     |
| C309       | C-CER,CHIP  | 2203-005065 | SA     |
| C310       | C-CER,CHIP  | 2203-005061 | SA     |
| C311       | C-CER,CHIP  | 2203-005065 | SA     |
| C312       | C-CER,CHIP  | 2203-006562 | SA     |
| C313       | C-CER,CHIP  | 2203-006562 | SA     |
| C314       | C-CER,CHIP  | 2203-006562 | SA     |
| C315       | C-CER,CHIP  | 2203-005061 | SA     |
| C316       | C-CER,CHIP  | 2203-005061 | SA     |
| C317       | C-CER,CHIP  | 2203-005061 | SA     |
| C318       | C-CER,CHIP  | 2203-005061 | SA     |
| C319       | C-CER,CHIP  | 2203-005061 | SA     |
| C320       | C-CER,CHIP  | 2203-005061 | SA     |
| C321       | C-CER,CHIP  | 2203-005061 | SA     |
| C322       | C-CER,CHIP  | 2203-006562 | SA     |

## Electrical Parts List

| Design LOC | Description | SEC CODE    | STATUS |
|------------|-------------|-------------|--------|
| C323       | C-CER,CHIP  | 2203-006562 | SA     |
| C324       | C-CER,CHIP  | 2203-005061 | SA     |
| C325       | C-CER,CHIP  | 2203-005061 | SA     |
| C326       | C-CER,CHIP  | 2203-005061 | SA     |
| C327       | C-CER,CHIP  | 2203-005061 | SA     |
| C328       | C-CER,CHIP  | 2203-005061 | SA     |
| C329       | C-CER,CHIP  | 2203-005061 | SA     |
| C330       | C-CER,CHIP  | 2203-005061 | SA     |
| C400       | C-CER,CHIP  | 2203-002525 | SA     |
| C401       | C-CER,CHIP  | 2203-005061 | SA     |
| C402       | C-CER,CHIP  | 2203-005061 | SA     |
| C403       | C-CER,CHIP  | 2203-005061 | SA     |
| C404       | C-CER,CHIP  | 2203-000438 | SA     |
| C405       | C-CER,CHIP  | 2203-005061 | SA     |
| C408       | C-CER,CHIP  | 2203-006208 | SA     |
| C409       | C-CER,CHIP  | 2203-006646 | SA     |
| C410       | C-CER,CHIP  | 2203-006646 | SA     |
| C411       | C-CER,CHIP  | 2203-006562 | SA     |
| C413       | C-CER,CHIP  | 2203-002443 | SA     |
| C414       | C-CER,CHIP  | 2203-005065 | SA     |
| C416       | C-CER,CHIP  | 2203-006646 | SA     |
| C418       | C-CER,CHIP  | 2203-005061 | SA     |
| C419       | C-CER,CHIP  | 2203-006646 | SA     |
| C420       | C-CER,CHIP  | 2203-006646 | SA     |
| C421       | C-CER,CHIP  | 2203-006646 | SA     |
| C422       | C-CER,CHIP  | 2203-002443 | SA     |
| C423       | C-CER,CHIP  | 2203-005482 | SA     |
| C424       | C-CER,CHIP  | 2203-006646 | SA     |
| C425       | C-CER,CHIP  | 2203-000138 | SA     |
| C426       | C-CER,CHIP  | 2203-005482 | SA     |
| C427       | C-CER,CHIP  | 2203-005482 | SA     |
| C428       | C-CER,CHIP  | 2203-000940 | SA     |
| C429       | C-CER,CHIP  | 2203-006208 | SA     |
| C430       | C-CER,CHIP  | 2203-006208 | SA     |
| C431       | C-CER,CHIP  | 2203-006208 | SA     |
| C432       | C-CER,CHIP  | 2203-006208 | SA     |
| C433       | C-CER,CHIP  | 2203-006208 | SA     |
| C434       | C-CER,CHIP  | 2203-005061 | SA     |
| C435       | C-CER,CHIP  | 2203-006562 | SA     |
| C436       | C-CER,CHIP  | 2203-006646 | SA     |
| C437       | C-CER,CHIP  | 2203-006646 | SA     |
| C438       | C-CER,CHIP  | 2203-006646 | SA     |
| C441       | C-CER,CHIP  | 2203-005482 | SA     |
| C442       | C-CER,CHIP  | 2203-005482 | SA     |
| C443       | C-CER,CHIP  | 2203-006208 | SA     |
| C444       | C-CER,CHIP  | 2203-005482 | SA     |
| C445       | C-CER,CHIP  | 2203-006646 | SA     |
| C446       | C-CER,CHIP  | 2203-005061 | SA     |
| C447       | C-CER,CHIP  | 2203-006646 | SA     |
| C448       | C-CER,CHIP  | 2203-006646 | SA     |

| Design LOC | Description | SEC CODE    | STATUS |
|------------|-------------|-------------|--------|
| C449       | C-CER,CHIP  | 2203-006646 | SA     |
| C450       | C-CER,CHIP  | 2203-006646 | SA     |
| C451       | C-CER,CHIP  | 2203-005482 | SA     |
| C452       | C-CER,CHIP  | 2203-006208 | SA     |
| C453       | C-CER,CHIP  | 2203-006646 | SA     |
| C454       | C-CER,CHIP  | 2203-006646 | SA     |
| C455       | C-CER,CHIP  | 2203-006208 | SA     |
| C456       | C-CER,CHIP  | 2203-005482 | SA     |
| C457       | C-CER,CHIP  | 2203-006646 | SA     |
| C458       | C-CER,CHIP  | 2203-005482 | SA     |
| C500       | C-CER,CHIP  | 2203-006626 | SA     |
| C501       | C-CER,CHIP  | 2203-006562 | SA     |
| C502       | C-CER,CHIP  | 2203-006562 | SA     |
| C503       | C-CER,CHIP  | 2203-006646 | SA     |
| C504       | C-CER,CHIP  | 2203-006646 | SA     |
| C505       | C-CER,CHIP  | 2203-005061 | SA     |
| C506       | C-CER,CHIP  | 2203-005061 | SA     |
| C507       | C-CER,CHIP  | 2203-006646 | SA     |
| C508       | C-CER,CHIP  | 2203-005061 | SA     |
| C509       | C-CER,CHIP  | 2203-005061 | SA     |
| C510       | C-CER,CHIP  | 2203-005061 | SA     |
| C511       | C-CER,CHIP  | 2203-005061 | SA     |
| C512       | C-CER,CHIP  | 2203-006646 | SA     |
| C513       | C-CER,CHIP  | 2203-005061 | SA     |
| C514       | C-CER,CHIP  | 2203-006646 | SA     |
| C515       | C-CER,CHIP  | 2203-006646 | SA     |
| C516       | C-CER,CHIP  | 2203-006201 | SA     |
| C517       | C-CER,CHIP  | 2203-005065 | SA     |
| C518       | C-CER,CHIP  | 2203-005061 | SA     |
| C520       | C-CER,CHIP  | 2203-006562 | SA     |
| C521       | C-CER,CHIP  | 2203-000585 | SA     |
| C522       | C-CER,CHIP  | 2203-006626 | SA     |
| C523       | C-CER,CHIP  | 2203-006626 | SA     |
| C524       | C-CER,CHIP  | 2203-005482 | SA     |
| C525       | C-CER,CHIP  | 2203-006201 | SA     |
| C526       | C-CER,CHIP  | 2203-000585 | SA     |
| C527       | C-CER,CHIP  | 2203-006201 | SA     |
| C530       | C-CER,CHIP  | 2203-000585 | SA     |
| C531       | C-CER,CHIP  | 2203-005065 | SA     |
| C533       | C-CER,CHIP  | 2203-000585 | SA     |
| C534       | C-CER,CHIP  | 2203-005061 | SA     |
| C536       | C-CER,CHIP  | 2203-000585 | SA     |
| C537       | C-CER,CHIP  | 2203-006646 | SA     |
| C538       | C-CER,CHIP  | 2203-005061 | SA     |
| C539       | C-CER,CHIP  | 2203-000585 | SA     |
| C540       | C-CER,CHIP  | 2203-000585 | SA     |
| C541       | C-CER,CHIP  | 2203-000585 | SA     |
| C542       | C-CER,CHIP  | 2203-000585 | SA     |
| C543       | C-CER,CHIP  | 2203-006646 | SA     |
| C544       | C-CER,CHIP  | 2203-005061 | SA     |

## Electrical Parts List

| Design LOC | Description | SEC CODE    | STATUS |
|------------|-------------|-------------|--------|
| C545       | C-CER,CHIP  | 2203-006562 | SA     |
| C546       | C-CER,CHIP  | 2203-000628 | SA     |
| C547       | C-CER,CHIP  | 2203-000628 | SA     |
| C548       | C-CER,CHIP  | 2203-006646 | SA     |
| C549       | C-CER,CHIP  | 2203-006423 | SA     |
| C551       | C-CER,CHIP  | 2203-005065 | SA     |
| C552       | C-CER,CHIP  | 2203-005061 | SA     |
| C553       | C-CER,CHIP  | 2203-006423 | SA     |
| C554       | C-CER,CHIP  | 2203-006562 | SA     |
| C555       | C-CER,CHIP  | 2203-006562 | SA     |
| C556       | C-CER,CHIP  | 2203-006562 | SA     |
| C557       | C-CER,CHIP  | 2203-005065 | SA     |
| C558       | C-CER,CHIP  | 2203-005061 | SA     |
| C559       | C-CER,CHIP  | 2203-006646 | SA     |
| C560       | C-CER,CHIP  | 2203-006562 | SA     |
| C561       | C-CER,CHIP  | 2203-006562 | SA     |
| C562       | C-CER,CHIP  | 2203-000628 | SA     |
| C563       | C-CER,CHIP  | 2203-006562 | SA     |
| C600       | C-CER,CHIP  | 2203-000438 | SA     |
| C603       | C-CER,CHIP  | 2203-006562 | SA     |
| C604       | C-CER,CHIP  | 2203-006562 | SA     |
| C605       | C-CER,CHIP  | 2203-002759 | SA     |
| C606       | C-CER,CHIP  | 2203-002759 | SA     |
| C608       | C-CER,CHIP  | 2203-005061 | SA     |
| C609       | C-CER,CHIP  | 2203-005061 | SA     |
| C610       | C-CER,CHIP  | 2203-005061 | SA     |
| C611       | C-CER,CHIP  | 2203-005061 | SA     |
| C612       | C-CER,CHIP  | 2203-005061 | SA     |
| C613       | C-CER,CHIP  | 2203-005061 | SA     |
| C700       | C-CER,CHIP  | 2203-006137 | SA     |
| C701       | C-CER,CHIP  | 2203-005482 | SA     |
| C703       | C-CER,CHIP  | 2203-005065 | SA     |
| C704       | C-CER,CHIP  | 2203-005061 | SA     |
| C705       | C-CER,CHIP  | 2203-006208 | SA     |
| C707       | C-CER,CHIP  | 2203-005482 | SA     |
| C709       | C-CER,CHIP  | 2203-000233 | SA     |
| C710       | C-CER,CHIP  | 2203-000233 | SA     |
| C712       | C-CER,CHIP  | 2203-005061 | SA     |
| C714       | C-CER,CHIP  | 2203-000233 | SA     |
| C715       | C-CER,CHIP  | 2203-005065 | SA     |
| C717       | C-CER,CHIP  | 2203-002443 | SA     |
| C800       | C-CER,CHIP  | 2203-000466 | SA     |
| C801       | C-CER,CHIP  | 2203-000466 | SA     |
| C805       | C-CER,CHIP  | 2203-006423 | SA     |
| C806       | C-CER,CHIP  | 2203-006423 | SA     |
| C807       | C-CER,CHIP  | 2203-006423 | SA     |
| C808       | C-CER,CHIP  | 2203-006423 | SA     |
| C809       | C-CER,CHIP  | 2203-006423 | SA     |
| C810       | C-CER,CHIP  | 2203-006423 | SA     |
| C811       | C-CER,CHIP  | 2203-006423 | SA     |

| Design LOC | Description | SEC CODE    | STATUS |
|------------|-------------|-------------|--------|
| C812       | C-CER,CHIP  | 2203-006423 | SA     |
| C813       | C-CER,CHIP  | 2203-006423 | SA     |
| C814       | C-CER,CHIP  | 2203-006423 | SA     |
| C815       | C-CER,CHIP  | 2203-006423 | SA     |
| C816       | C-CER,CHIP  | 2203-006423 | SA     |
| C817       | C-CER,CHIP  | 2203-006423 | SA     |
| C818       | C-CER,CHIP  | 2203-006423 | SA     |
| C819       | C-CER,CHIP  | 2203-006423 | SA     |
| C820       | C-CER,CHIP  | 2203-006423 | SA     |
| C821       | C-CER,CHIP  | 2203-005482 | SA     |
| C822       | C-CER,CHIP  | 2203-000254 | SA     |
| C823       | C-CER,CHIP  | 2203-000254 | SA     |
| C824       | C-CER,CHIP  | 2203-000254 | SA     |
| C825       | C-CER,CHIP  | 2203-000254 | SA     |
| C826       | C-CER,CHIP  | 2203-006053 | SA     |
| C827       | C-CER,CHIP  | 2203-005482 | SA     |
| C828       | C-CER,CHIP  | 2203-006423 | SA     |
| C829       | C-CER,CHIP  | 2203-006423 | SA     |
| C830       | C-CER,CHIP  | 2203-006423 | SA     |
| C831       | C-CER,CHIP  | 2203-006423 | SA     |
| C832       | C-CER,CHIP  | 2203-006423 | SA     |
| C833       | C-CER,CHIP  | 2203-006423 | SA     |
| C834       | C-CER,CHIP  | 2203-006423 | SA     |
| C835       | C-CER,CHIP  | 2203-006423 | SA     |
| C836       | C-CER,CHIP  | 2203-006423 | SA     |
| C837       | C-CER,CHIP  | 2203-006423 | SA     |
| C838       | C-CER,CHIP  | 2203-006423 | SA     |
| C839       | C-CER,CHIP  | 2203-006423 | SA     |
| C840       | C-CER,CHIP  | 2203-006423 | SA     |
| C841       | C-CER,CHIP  | 2203-006423 | SA     |
| C842       | C-CER,CHIP  | 2203-006423 | SA     |
| C843       | C-CER,CHIP  | 2203-006423 | SA     |
| C844       | C-CER,CHIP  | 2203-006423 | SA     |
| C845       | C-CER,CHIP  | 2203-006423 | SA     |
| C846       | C-CER,CHIP  | 2203-006194 | SA     |
| C847       | C-CER,CHIP  | 2203-001072 | SA     |
| C848       | C-CER,CHIP  | 2203-001072 | SA     |
| C849       | C-CER,CHIP  | 2203-001405 | SA     |
| C850       | C-CER,CHIP  | 2203-001405 | SA     |
| C852       | C-CER,CHIP  | 2203-001405 | SA     |
| C853       | C-CER,CHIP  | 2203-005065 | SA     |
| C854       | C-CER,CHIP  | 2203-005061 | SA     |
| C855       | C-CER,CHIP  | 2203-006091 | SA     |
| C856       | C-CER,CHIP  | 2203-005061 | SA     |
| C857       | C-CER,CHIP  | 2203-005061 | SA     |
| C858       | C-CER,CHIP  | 2203-006091 | SA     |
| C859       | C-CER,CHIP  | 2203-005061 | SA     |
| C860       | C-CER,CHIP  | 2203-005061 | SA     |
| C861       | C-CER,CHIP  | 2203-000233 | SA     |
| C862       | C-CER,CHIP  | 2203-000254 | SA     |

## Electrical Parts List

| Design LOC | Description           | SEC CODE    | STATUS |
|------------|-----------------------|-------------|--------|
| C863       | C-CER,CHIP            | 2203-000254 | SA     |
| C864       | C-CER,CHIP            | 2203-005061 | SA     |
| C865       | C-CER,CHIP            | 2203-006562 | SA     |
| C866       | C-CER,CHIP            | 2203-005483 | SA     |
| C867       | C-CER,CHIP            | 2203-006194 | SA     |
| C901       | C-CER,CHIP            | 2203-001652 | SA     |
| C902       | C-CER,CHIP            | 2203-003054 | SA     |
| C903       | C-CER,CHIP            | 2203-003054 | SA     |
| C904       | C-CER,CHIP            | 2203-005482 | SA     |
| C905       | C-CER,CHIP            | 2203-000233 | SA     |
| C906       | C-CER,CHIP            | 2203-005482 | SA     |
| C907       | C-CER,CHIP            | 2203-006423 | SA     |
| C908       | C-CER,CHIP            | 2203-006208 | SA     |
| C909       | C-CER,CHIP            | 2203-006208 | SA     |
| C910       | C-CER,CHIP            | 2203-005482 | SA     |
| C911       | C-CER,CHIP            | 2203-000278 | SA     |
| C912       | C-CER,CHIP            | 2203-006208 | SA     |
| C913       | C-CER,CHIP            | 2203-006208 | SA     |
| C914       | C-CER,CHIP            | 2203-006208 | SA     |
| C915       | C-CER,CHIP            | 2203-000278 | SA     |
| C916       | C-CER,CHIP            | 2203-006562 | SA     |
| C917       | C-CER,CHIP            | 2203-000278 | SA     |
| C918       | C-CER,CHIP            | 2203-006201 | SA     |
| C919       | C-CER,CHIP            | 2203-000278 | SA     |
| C920       | C-CER,CHIP            | 2203-006201 | SA     |
| C921       | C-CER,CHIP            | 2203-006201 | SA     |
| C922       | C-CER,CHIP            | 2203-000278 | SA     |
| C924       | C-CER,CHIP            | 2203-005482 | SA     |
| C925       | C-CER,CHIP            | 2203-000812 | SA     |
| C927       | C-CER,CHIP            | 2203-000812 | SA     |
| C929       | C-CER,CHIP            | 2203-000254 | SA     |
| C930       | C-CER,CHIP            | 2203-005482 | SA     |
| C931       | C-CER,CHIP            | 2203-005482 | SA     |
| C932       | C-CER,CHIP            | 2203-005482 | SA     |
| C933       | C-CER,CHIP            | 2203-005482 | SA     |
| C934       | C-CER,CHIP            | 2203-005482 | SA     |
| C935       | C-CER,CHIP            | 2203-006208 | SA     |
| C936       | C-CER,CHIP            | 2203-005482 | SA     |
| C937       | C-CER,CHIP            | 2203-006646 | SA     |
| C938       | C-CER,CHIP            | 2203-005482 | SA     |
| C939       | C-CER,CHIP            | 2203-005061 | SA     |
| C940       | C-CER,CHIP            | 2203-005061 | SA     |
| C941       | C-CER,CHIP            | 2203-006562 | SA     |
| CD702      | CONNECTOR-CARD EDGE   | 3709-001251 | SA     |
| CN1000     | HEADER-BOARD TO BOARD | 3711-005394 | SA     |
| CPL1102    | COUPLER-DIRECTION     | 4709-001361 | SA     |
| CPL1106    | COUPLER-DIRECTION     | 4709-001361 | SA     |
| D1000      | DIODE-RECTIFIER       | 0402-001329 | SA     |
| D1001      | DIODE-SCHOTTKY        | 0404-001152 | SA     |
| D1002      | DIODE-SCHOTTKY        | 0404-001152 | SA     |

| Design LOC | Description           | SEC CODE    | STATUS |
|------------|-----------------------|-------------|--------|
| D1003      | DIODE-SCHOTTKY        | 0404-001152 | SA     |
| D1101      | DIODE-SCHOTTKY        | 0404-001093 | SA     |
| D400       | DIODE-SCHOTTKY        | 0404-001089 | SA     |
| D401       | DIODE-SCHOTTKY        | 0404-001089 | SA     |
| D500       | DIODE-TVS             | 0406-001169 | SA     |
| D501       | DIODE-TVS             | 0406-001150 | SA     |
| D600       | DIODE-TVS             | 0406-001150 | SA     |
| D715       | DIODE-TVS             | 0406-001150 | SA     |
| D716       | DIODE-TVS             | 0406-001150 | SA     |
| D717       | DIODE-TVS             | 0406-001150 | SA     |
| D723       | DIODE-SWITCHING       | 0401-001110 | SA     |
| D724       | DIODE-TVS             | 0406-001150 | SA     |
| D901       | DIODE-ARRAY           | 0407-001002 | SA     |
| DUF1107    | DUPLEXER-SAW          | 2909-001255 | SA     |
| DUF1200    | DUPLEXER-ASM          | 2909-001197 | SA     |
| EAR500     | JACK-EAR PHONE        | 3722-002067 | SA     |
| F1000      | FILTER-SAW            | 2904-001533 | SA     |
| F1001      | FILTER-SAW            | 2904-001494 | SA     |
| F1002      | FILTER-SAW            | 2904-001414 | SA     |
| F1100      | FILTER-SAW            | 2904-001424 | SA     |
| F1101      | FILTER-SAW            | 2904-001499 | SA     |
| F1103      | DUPLEXER-FBAR         | 2910-000009 | SA     |
| F1104      | FILTER-SAW            | 2904-001417 | SA     |
| F1105      | FILTER-SAW            | 2904-001502 | SA     |
| F600       | FILTER-EMI/ESD        | 2901-001294 | SA     |
| F601       | FILTER-EMI/ESD        | 2901-001294 | SA     |
| HDC600     | HEADER-BOARD TO BOARD | 3711-005578 | SA     |
| IFC703     | SOCKET-INTERFACE      | 3710-001732 | SA     |
| L1000      | INDUCTOR-SMD          | 2703-002829 | SA     |
| L1000      | BEAD-SMD              | 3301-001729 | SA     |
| L1001      | BEAD-SMD              | 3301-001336 | SA     |
| L1001      | BEAD-SMD              | 3301-001729 | SA     |
| L1002      | INDUCTOR-SMD          | 2703-002200 | SA     |
| L1002      | INDUCTOR-SMD          | 2703-002856 | SA     |
| L1003      | INDUCTOR-SMD          | 2703-002204 | SA     |
| L1004      | INDUCTOR-SMD          | 2703-002205 | SA     |
| L1005      | INDUCTOR-SMD          | 2703-002268 | SA     |
| L1006      | INDUCTOR-SMD          | 2703-002268 | SA     |
| L1007      | INDUCTOR-SMD          | 2703-002205 | SA     |
| L1008      | INDUCTOR-SMD          | 2703-002207 | SA     |
| L1009      | INDUCTOR-SMD          | 2703-002314 | SA     |
| L1010      | INDUCTOR-SMD          | 2703-002176 | SA     |
| L1011      | INDUCTOR-SMD          | 2703-002200 | SA     |
| L1012      | INDUCTOR-SMD          | 2703-002176 | SA     |
| L1013      | INDUCTOR-SMD          | 2703-002365 | SA     |
| L1014      | INDUCTOR-SMD          | 2703-002281 | SA     |
| L1015      | INDUCTOR-SMD          | 2703-002309 | SA     |
| L1016      | INDUCTOR-SMD          | 2703-002176 | SA     |
| L1017      | INDUCTOR-SMD          | 2703-002198 | SA     |
| L1018      | INDUCTOR-SMD          | 2703-001737 | SA     |



## Electrical Parts List

| Design LOC | Description  | SEC CODE    | STATUS |
|------------|--------------|-------------|--------|
| L1019      | INDUCTOR-SMD | 2703-002308 | SA     |
| L1020      | BEAD-SMD     | 3301-001729 | SA     |
| L1021      | INDUCTOR-SMD | 2703-002309 | SA     |
| L1022      | INDUCTOR-SMD | 2703-001747 | SA     |
| L1102      | BEAD-SMD     | 3301-001342 | SA     |
| L1105      | INDUCTOR-SMD | 2703-002281 | SA     |
| L1106      | INDUCTOR-SMD | 2703-002485 | SA     |
| L1107      | BEAD-SMD     | 3301-001342 | SA     |
| L1109      | INDUCTOR-SMD | 2703-002206 | SA     |
| L1110      | INDUCTOR-SMD | 2703-002281 | SA     |
| L1111      | BEAD-SMD     | 3301-001120 | SA     |
| L1112      | INDUCTOR-SMD | 2703-002208 | SA     |
| L1113      | INDUCTOR-SMD | 2703-002596 | SA     |
| L1114      | INDUCTOR-SMD | 2703-002208 | SA     |
| L1116      | INDUCTOR-SMD | 2703-001938 | SA     |
| L1117      | INDUCTOR-SMD | 2703-002314 | SA     |
| L1118      | INDUCTOR-SMD | 2703-001409 | SA     |
| L1119      | INDUCTOR-SMD | 2703-002314 | SA     |
| L1121      | INDUCTOR-SMD | 2703-002204 | SA     |
| L1122      | INDUCTOR-SMD | 2703-002281 | SA     |
| L1200      | BEAD-SMD     | 3301-001342 | SA     |
| L1202      | INDUCTOR-SMD | 2703-001938 | SA     |
| L1203      | INDUCTOR-SMD | 2703-002368 | SA     |
| L1205      | INDUCTOR-SMD | 2703-002281 | SA     |
| L1209      | INDUCTOR-SMD | 2703-001990 | SA     |
| L1211      | BEAD-SMD     | 3301-001756 | SA     |
| L200       | BEAD-SMD     | 3301-001729 | SA     |
| L400       | INDUCTOR-SMD | 2703-002856 | SA     |
| L401       | INDUCTOR-SMD | 2703-002803 | SA     |
| L402       | BEAD-SMD     | 3301-001342 | SA     |
| L403       | INDUCTOR-SMD | 2703-002829 | SA     |
| L500       | BEAD-SMD     | 3301-001336 | SA     |
| L501       | BEAD-SMD     | 3301-001756 | SA     |
| L502       | BEAD-SMD     | 3301-001756 | SA     |
| L503       | BEAD-SMD     | 3301-001756 | SA     |
| L600       | BEAD-SMD     | 3301-001756 | SA     |
| L800       | BEAD-SMD     | 3301-001729 | SA     |
| L900       | INDUCTOR-SMD | 2703-001868 | SA     |
| L901       | INDUCTOR-SMD | 2703-001868 | SA     |
| L902       | INDUCTOR-SMD | 2703-002653 | SA     |
| L903       | INDUCTOR-SMD | 2703-002653 | SA     |
| LED700     | LED          | 0601-001602 | SA     |
| LED701     | LED          | 0601-001602 | SA     |
| LED702     | LED          | 0601-001602 | SA     |
| LED703     | LED          | 0601-001602 | SA     |
| LED704     | LED          | 0601-001602 | SA     |
| LED705     | LED          | 0601-001602 | SA     |
| LED706     | LED          | 0601-001602 | SA     |
| LED707     | LED          | 0601-001602 | SA     |
| LED708     | LED          | 0601-001602 | SA     |

| Design LOC | Description       | SEC CODE    | STATUS |
|------------|-------------------|-------------|--------|
| LED709     | LED               | 0601-001602 | SA     |
| LED710     | LED               | 0601-001602 | SA     |
| LED711     | LED               | 0601-001602 | SA     |
| LED712     | LED               | 0601-001602 | SA     |
| LED713     | LED               | 0601-001602 | SA     |
| LED714     | LED               | 0601-001602 | SA     |
| MOD600     | BLUETOOTH MODULE  | 4709-001354 | SA     |
| OSC200     | CRYSTAL-SMD       | 2801-003856 | SA     |
| OSC201     | CRYSTAL-SMD       | 2801-004189 | SA     |
| OSC500     | CRYSTAL-SMD       | 2801-004225 | SA     |
| OSC800     | RESONATOR-CERAMIC | 2802-001182 | SA     |
| OSC900     | CRYSTAL-SMD       | 2801-003856 | SA     |
| PAM1101    | IC-POWER AMP      | 1201-002174 | SA     |
| PAM1103    | IC-POWER AMP      | 1201-001957 | SA     |
| PAM1104    | IC-POWER AMP      | 1201-001894 | SA     |
| R1000      | R-CHIP            | 2007-001290 | SA     |
| R1000      | R-CHIP            | 2007-007489 | SA     |
| R1001      | R-CHIP            | 2007-000148 | SA     |
| R1001      | R-CHIP            | 2007-001290 | SA     |
| R1002      | R-CHIP            | 2007-000162 | SA     |
| R1002      | R-CHIP            | 2007-000982 | SA     |
| R1003      | R-CHIP            | 2007-007014 | SA     |
| R1003      | R-CHIP            | 2007-007311 | SA     |
| R1004      | R-CHIP            | 2007-007014 | SA     |
| R1004      | R-CHIP            | 2007-007491 | SA     |
| R1005      | R-CHIP            | 2007-000172 | SA     |
| R1005      | R-CHIP            | 2007-000982 | SA     |
| R1006      | R-CHIP            | 2007-000138 | SA     |
| R1006      | R-CHIP            | 2007-000167 | SA     |
| R1007      | R-CHIP            | 2007-000138 | SA     |
| R1007      | R-CHIP            | 2007-007943 | SA     |
| R1008      | R-CHIP            | 2007-000172 | SA     |
| R1008      | R-CHIP            | 2007-007014 | SA     |
| R1009      | R-CHIP            | 2007-000162 | SA     |
| R1009      | R-CHIP            | 2007-001291 | SA     |
| R1010      | R-CHIP            | 2007-000140 | SA     |
| R1010      | R-CHIP            | 2007-000171 | SA     |
| R1011      | R-CHIP            | 2007-000143 | SA     |
| R1011      | R-CHIP            | 2007-007488 | SA     |
| R1012      | R-CHIP            | 2007-000171 | SA     |
| R1012      | R-CHIP            | 2007-001288 | SA     |
| R1013      | R-CHIP            | 2007-008275 | SA     |
| R1014      | R-CHIP            | 2007-000172 | SA     |
| R1014      | R-CHIP            | 2007-007095 | SA     |
| R1015      | R-CHIP            | 2007-000174 | SA     |
| R1015      | R-CHIP            | 2007-007092 | SNA    |
| R1016      | R-CHIP            | 2007-003010 | SA     |
| R1016      | R-CHIP            | 2007-003030 | SA     |
| R1017      | R-CHIP            | 2007-007092 | SNA    |
| R1018      | R-CHIP            | 2007-000140 | SA     |

## Electrical Parts List

| Design LOC | Description | SEC CODE    | STATUS |
|------------|-------------|-------------|--------|
| R1019      | R-CHIP      | 2007-007588 | SA     |
| R1020      | R-CHIP      | 2007-000142 | SA     |
| R1021      | R-CHIP      | 2007-001298 | SA     |
| R1022      | R-CHIP      | 2007-007698 | SA     |
| R1023      | R-CHIP      | 2007-000138 | SA     |
| R1100      | R-CHIP      | 2007-008045 | SA     |
| R1101      | R-CHIP      | 2007-008045 | SA     |
| R1102      | R-CHIP      | 2007-001291 | SA     |
| R1103      | R-CHIP      | 2007-001217 | SA     |
| R1104      | R-CHIP      | 2007-007699 | SA     |
| R1105      | R-CHIP      | 2007-007699 | SA     |
| R1106      | R-CHIP      | 2007-000174 | SA     |
| R1107      | R-CHIP      | 2007-000139 | SA     |
| R1108      | R-CHIP      | 2007-007306 | SA     |
| R1109      | R-CHIP      | 2007-007798 | SA     |
| R1110      | R-CHIP      | 2007-007133 | SA     |
| R1111      | R-CHIP      | 2007-007133 | SA     |
| R1112      | R-CHIP      | 2007-007318 | SA     |
| R1113      | R-CHIP      | 2007-007310 | SA     |
| R1114      | R-CHIP      | 2007-008419 | SA     |
| R1115      | R-CHIP      | 2007-001298 | SA     |
| R1116      | R-CHIP      | 2007-001298 | SA     |
| R1117      | R-CHIP      | 2007-008263 | SA     |
| R1118      | R-CHIP      | 2007-000145 | SA     |
| R1119      | R-CHIP      | 2007-007311 | SA     |
| R1120      | R-CHIP      | 2007-008806 | SA     |
| R1121      | R-CHIP      | 2007-000148 | SA     |
| R1122      | R-CHIP      | 2007-007491 | SA     |
| R1123      | R-CHIP      | 2007-001119 | SA     |
| R1124      | R-CHIP      | 2007-000174 | SA     |
| R1125      | R-CHIP      | 2007-008045 | SA     |
| R1126      | R-CHIP      | 2007-001298 | SA     |
| R1127      | R-CHIP      | 2007-008531 | SA     |
| R1128      | R-CHIP      | 2007-000148 | SA     |
| R1129      | R-CHIP      | 2007-001307 | SA     |
| R1130      | R-CHIP      | 2007-003112 | SA     |
| R1200      | R-CHIP      | 2007-008483 | SA     |
| R1202      | R-CHIP      | 2007-008483 | SA     |
| R1203      | R-CHIP      | 2007-008483 | SA     |
| R1204      | R-CHIP      | 2007-008483 | SA     |
| R1205      | R-CHIP      | 2007-000143 | SA     |
| R1208      | R-CHIP      | 2007-008483 | SA     |
| R1209      | R-CHIP      | 2007-008483 | SA     |
| R1210      | R-CHIP      | 2007-000171 | SA     |
| R200       | R-CHIP      | 2007-001308 | SA     |
| R201       | R-CHIP      | 2007-001303 | SA     |
| R202       | R-CHIP      | 2007-000168 | SA     |
| R203       | R-CHIP      | 2007-000171 | SA     |
| R207       | R-CHIP      | 2007-000148 | SA     |
| R208       | R-CHIP      | 2007-000171 | SA     |

| Design LOC | Description | SEC CODE    | STATUS |
|------------|-------------|-------------|--------|
| R210       | R-CHIP      | 2007-000171 | SA     |
| R211       | R-CHIP      | 2007-000172 | SA     |
| R212       | R-CHIP      | 2007-000171 | SA     |
| R214       | R-CHIP      | 2007-000171 | SA     |
| R215       | R-CHIP      | 2007-000172 | SA     |
| R216       | R-CHIP      | 2007-000171 | SA     |
| R217       | R-CHIP      | 2007-000144 | SA     |
| R218       | R-CHIP      | 2007-000144 | SA     |
| R219       | R-CHIP      | 2007-000148 | SA     |
| R220       | R-CHIP      | 2007-000162 | SA     |
| R221       | R-CHIP      | 2007-000162 | SA     |
| R222       | R-CHIP      | 2007-000162 | SA     |
| R223       | R-CHIP      | 2007-000148 | SA     |
| R224       | R-CHIP      | 2007-000171 | SA     |
| R225       | R-CHIP      | 2007-000148 | SA     |
| R226       | R-CHIP      | 2007-001341 | SA     |
| R300       | R-CHIP      | 2007-000148 | SA     |
| R301       | R-CHIP      | 2007-000171 | SA     |
| R302       | R-CHIP      | 2007-000162 | SA     |
| R303       | R-CHIP      | 2007-000162 | SA     |
| R304       | R-CHIP      | 2007-000162 | SA     |
| R305       | R-CHIP      | 2007-000162 | SA     |
| R309       | R-CHIP      | 2007-000171 | SA     |
| R310       | R-CHIP      | 2007-000148 | SA     |
| R311       | R-CHIP      | 2007-000162 | SA     |
| R313       | R-CHIP      | 2007-000148 | SA     |
| R314       | R-CHIP      | 2007-000162 | SA     |
| R315       | R-CHIP      | 2007-000162 | SA     |
| R316       | R-CHIP      | 2007-000162 | SA     |
| R317       | R-CHIP      | 2007-000162 | SA     |
| R318       | R-CHIP      | 2007-000162 | SA     |
| R319       | R-CHIP      | 2007-000162 | SA     |
| R320       | R-CHIP      | 2007-000162 | SA     |
| R321       | R-CHIP      | 2007-000162 | SA     |
| R322       | R-CHIP      | 2007-000162 | SA     |
| R323       | R-CHIP      | 2007-000148 | SA     |
| R324       | R-CHIP      | 2007-000168 | SA     |
| R325       | R-CHIP      | 2007-001291 | SA     |
| R326       | R-CHIP      | 2007-000173 | SA     |
| R401       | R-CHIP      | 2007-000171 | SA     |
| R402       | R-CHIP      | 2007-000758 | SA     |
| R403       | R-CHIP      | 2007-001325 | SA     |
| R404       | R-CHIP      | 2007-000758 | SA     |
| R405       | R-CHIP      | 2007-001325 | SA     |
| R406       | R-CHIP      | 2007-000173 | SA     |
| R408       | R-CHIP      | 2007-000168 | SA     |
| R409       | R-CHIP      | 2007-000171 | SA     |
| R410       | R-CHIP      | 2007-000162 | SA     |
| R411       | R-CHIP      | 2007-000162 | SA     |
| R412       | R-CHIP      | 2007-000168 | SA     |

## Electrical Parts List

| Design LOC | Description | SEC CODE    | STATUS |
|------------|-------------|-------------|--------|
| R413       | R-CHIP      | 2007-000168 | SA     |
| R417       | R-CHIP      | 2007-007592 | SA     |
| R420       | R-CHIP      | 2007-001308 | SA     |
| R421       | R-CHIP      | 2007-000171 | SA     |
| R422       | R-CHIP      | 2007-000566 | SA     |
| R423       | R-CHIP      | 2007-000171 | SA     |
| R424       | R-CHIP      | 2007-000148 | SA     |
| R425       | R-CHIP      | 2007-000171 | SA     |
| R428       | R-CHIP      | 2007-007334 | SA     |
| R429       | R-CHIP      | 2007-000171 | SA     |
| R431       | R-CHIP      | 2007-000566 | SA     |
| R432       | R-CHIP      | 2007-000148 | SA     |
| R433       | R-CHIP      | 2007-000148 | SA     |
| R434       | R-CHIP      | 2007-000148 | SA     |
| R435       | R-CHIP      | 2007-000164 | SA     |
| R436       | R-CHIP      | 2007-000148 | SA     |
| R437       | R-CHIP      | 2007-000148 | SA     |
| R500       | R-CHIP      | 2007-007528 | SA     |
| R501       | R-CHIP      | 2007-000171 | SA     |
| R506       | R-CHIP      | 2007-007310 | SA     |
| R508       | R-CHIP      | 2007-007310 | SA     |
| R510       | R-CHIP      | 2007-000139 | SA     |
| R511       | R-CHIP      | 2007-000171 | SA     |
| R512       | R-CHIP      | 2007-000139 | SA     |
| R513       | R-CHIP      | 2007-000162 | SA     |
| R514       | R-CHIP      | 2007-000162 | SA     |
| R517       | R-CHIP      | 2007-000157 | SA     |
| R518       | R-CHIP      | 2007-001284 | SA     |
| R519       | R-CHIP      | 2007-000157 | SA     |
| R521       | R-CHIP      | 2007-000171 | SA     |
| R522       | R-CHIP      | 2007-000162 | SA     |
| R523       | R-CHIP      | 2007-000157 | SA     |
| R525       | R-CHIP      | 2007-000171 | SA     |
| R526       | R-CHIP      | 2007-000157 | SA     |
| R527       | R-CHIP      | 2007-000171 | SA     |
| R529       | R-CHIP      | 2007-000174 | SA     |
| R530       | R-CHIP      | 2007-008055 | SA     |
| R531       | R-CHIP      | 2007-008478 | SA     |
| R532       | R-CHIP      | 2007-008052 | SA     |
| R533       | R-CHIP      | 2007-008588 | SA     |
| R534       | R-CHIP      | 2007-008055 | SA     |
| R535       | R-CHIP      | 2007-008055 | SA     |
| R536       | R-CHIP      | 2007-008055 | SA     |
| R537       | R-CHIP      | 2007-008052 | SA     |
| R538       | R-CHIP      | 2007-008055 | SA     |
| R539       | R-CHIP      | 2007-007134 | SA     |
| R540       | R-CHIP      | 2007-007134 | SA     |
| R541       | R-CHIP      | 2007-008055 | SA     |
| R542       | R-CHIP      | 2007-008478 | SA     |
| R543       | R-CHIP      | 2007-008117 | SA     |

| Design LOC | Description | SEC CODE    | STATUS |
|------------|-------------|-------------|--------|
| R544       | R-CHIP      | 2007-000171 | SA     |
| R545       | R-CHIP      | 2007-007134 | SA     |
| R546       | R-CHIP      | 2007-007134 | SA     |
| R547       | R-CHIP      | 2007-008055 | SA     |
| R548       | R-CHIP      | 2007-000171 | SA     |
| R549       | R-CHIP      | 2007-000171 | SA     |
| R600       | R-CHIP      | 2007-000148 | SA     |
| R601       | R-CHIP      | 2007-000148 | SA     |
| R602       | R-CHIP      | 2007-000148 | SA     |
| R603       | R-CHIP      | 2007-000148 | SA     |
| R604       | R-CHIP      | 2007-000171 | SA     |
| R606       | R-CHIP      | 2007-000171 | SA     |
| R607       | R-CHIP      | 2007-000171 | SA     |
| R608       | R-CHIP      | 2007-000168 | SA     |
| R609       | R-CHIP      | 2007-000242 | SA     |
| R610       | R-CHIP      | 2007-000171 | SA     |
| R612       | R-CHIP      | 2007-000171 | SA     |
| R613       | R-CHIP      | 2007-000168 | SA     |
| R700       | R-CHIP      | 2007-000162 | SA     |
| R701       | R-CHIP      | 2007-002970 | SA     |
| R702       | R-CHIP      | 2007-002970 | SA     |
| R703       | R-CHIP      | 2007-002970 | SA     |
| R704       | R-CHIP      | 2007-002970 | SA     |
| R705       | R-CHIP      | 2007-002970 | SA     |
| R706       | R-CHIP      | 2007-002970 | SA     |
| R707       | R-CHIP      | 2007-002970 | SA     |
| R708       | R-CHIP      | 2007-002970 | SA     |
| R709       | R-CHIP      | 2007-002970 | SA     |
| R710       | R-CHIP      | 2007-002970 | SA     |
| R711       | R-CHIP      | 2007-002970 | SA     |
| R712       | R-CHIP      | 2007-002970 | SA     |
| R713       | R-CHIP      | 2007-002970 | SA     |
| R714       | R-CHIP      | 2007-002970 | SA     |
| R715       | R-CHIP      | 2007-002970 | SA     |
| R716       | R-CHIP      | 2007-000162 | SA     |
| R717       | R-CHIP      | 2007-000162 | SA     |
| R718       | R-CHIP      | 2007-000162 | SA     |
| R719       | R-CHIP      | 2007-000162 | SA     |
| R720       | R-CHIP      | 2007-000162 | SA     |
| R721       | R-CHIP      | 2007-000162 | SA     |
| R722       | R-CHIP      | 2007-000162 | SA     |
| R723       | R-CHIP      | 2007-000162 | SA     |
| R724       | R-CHIP      | 2007-000171 | SA     |
| R725       | R-CHIP      | 2007-000171 | SA     |
| R728       | R-CHIP      | 2007-000168 | SA     |
| R729       | R-CHIP      | 2007-000171 | SA     |
| R730       | R-CHIP      | 2007-007311 | SA     |
| R731       | R-CHIP      | 2007-007107 | SA     |
| R732       | R-CHIP      | 2007-000162 | SA     |
| R733       | R-CHIP      | 2007-000162 | SA     |

## Electrical Parts List

| Design LOC | Description | SEC CODE    | STATUS |
|------------|-------------|-------------|--------|
| R734       | R-CHIP      | 2007-008055 | SA     |
| R735       | R-CHIP      | 2007-000171 | SA     |
| R736       | R-CHIP      | 2007-007107 | SA     |
| R737       | R-CHIP      | 2007-007312 | SA     |
| R740       | R-CHIP      | 2007-000171 | SA     |
| R741       | R-CHIP      | 2007-000157 | SA     |
| R742       | R-CHIP      | 2007-000148 | SA     |
| R743       | R-CHIP      | 2007-000157 | SA     |
| R744       | R-CHIP      | 2007-000157 | SA     |
| R745       | R-CHIP      | 2007-000157 | SA     |
| R746       | R-CHIP      | 2007-000162 | SA     |
| R747       | R-CHIP      | 2007-000162 | SA     |
| R754       | R-CHIP      | 2007-007092 | SNA    |
| R756       | R-CHIP      | 2007-007092 | SNA    |
| R757       | R-CHIP      | 2007-000162 | SA     |
| R760       | R-CHIP      | 2007-000242 | SA     |
| R805       | R-CHIP      | 2007-001313 | SNA    |
| R808       | R-CHIP      | 2007-008516 | SA     |
| R816       | R-CHIP      | 2007-000171 | SA     |
| R818       | R-CHIP      | 2007-008483 | SA     |
| R819       | R-CHIP      | 2007-008542 | SA     |
| R820       | R-CHIP      | 2007-008542 | SA     |
| R821       | R-CHIP      | 2007-008542 | SA     |
| R822       | R-CHIP      | 2007-008542 | SA     |
| R823       | R-CHIP      | 2007-000171 | SA     |
| R824       | R-CHIP      | 2007-000171 | SA     |
| R825       | R-CHIP      | 2007-008542 | SA     |
| R826       | R-CHIP      | 2007-000143 | SA     |
| R827       | R-CHIP      | 2007-001292 | SA     |
| R828       | R-CHIP      | 2007-001292 | SA     |
| R829       | R-CHIP      | 2007-001292 | SA     |
| R830       | R-CHIP      | 2007-001292 | SA     |
| R831       | R-CHIP      | 2007-001292 | SA     |
| R832       | R-CHIP      | 2007-000141 | SA     |
| R833       | R-CHIP      | 2007-000171 | SA     |
| R834       | R-CHIP      | 2007-000171 | SA     |
| R835       | R-CHIP      | 2007-000171 | SA     |
| R837       | R-CHIP      | 2007-001319 | SA     |
| R838       | R-CHIP      | 2007-001339 | SA     |
| R839       | R-CHIP      | 2007-000148 | SA     |
| R840       | R-CHIP      | 2007-000169 | SA     |
| R841       | R-CHIP      | 2007-000148 | SA     |
| R842       | R-CHIP      | 2007-008542 | SA     |
| R843       | R-CHIP      | 2007-001339 | SA     |
| R844       | R-CHIP      | 2007-008516 | SA     |
| R845       | R-CHIP      | 2007-008542 | SA     |
| R847       | R-CHIP      | 2007-000171 | SA     |
| R848       | R-CHIP      | 2007-000171 | SA     |
| R849       | R-CHIP      | 2007-000171 | SA     |
| R853       | R-CHIP      | 2007-007529 | SA     |

| Design LOC | Description           | SEC CODE    | STATUS |
|------------|-----------------------|-------------|--------|
| R854       | R-CHIP                | 2007-007107 | SA     |
| R855       | R-CHIP                | 2007-000171 | SA     |
| R856       | R-CHIP                | 2007-008052 | SA     |
| R858       | R-CHIP                | 2007-000775 | SA     |
| R859       | R-CHIP                | 2007-007313 | SA     |
| R861       | R-CHIP                | 2007-008419 | SA     |
| R862       | R-CHIP                | 2007-000168 | SA     |
| R863       | R-CHIP                | 2007-008045 | SA     |
| R900       | R-CHIP                | 2007-000162 | SA     |
| R902       | R-CHIP                | 2007-000157 | SA     |
| R903       | R-CHIP                | 2007-007142 | SA     |
| R904       | R-CHIP                | 2007-007943 | SA     |
| R905       | R-CHIP                | 2007-000162 | SA     |
| R906       | R-CHIP                | 2007-000171 | SA     |
| R907       | R-CHIP                | 2007-000155 | SNA    |
| R908       | R-CHIP                | 2007-000171 | SA     |
| R909       | R-CHIP                | 2007-000171 | SA     |
| R910       | R-CHIP                | 2007-001298 | SA     |
| R911       | R-CHIP                | 2007-000171 | SA     |
| R912       | R-CHIP                | 2007-007468 | SA     |
| R913       | R-CHIP                | 2007-008542 | SA     |
| R914       | R-CHIP                | 2007-000171 | SA     |
| R915       | R-CHIP                | 2007-000140 | SA     |
| R916       | R-CHIP                | 2007-000171 | SA     |
| R917       | R-CHIP                | 2007-000143 | SA     |
| R919       | R-CHIP                | 2007-000171 | SA     |
| R920       | R-CHIP                | 2007-007014 | SA     |
| R921       | R-CHIP                | 2007-000171 | SA     |
| RFS12      | CONNECTOR-COAXIAL     | 3705-001273 | SA     |
| RFS50      | CONNECTOR-COAXIAL     | 3705-001287 | SA     |
| SIM900     | CONNECTOR-CARD EDGE   | 3709-001336 | SA     |
| SLC601     | CONNECTOR-FPC/FFC/PIC | 3708-001853 | SA     |
| SW700      | SWITCH-SLIDE          | 3408-001109 | SA     |
| SW701      | SWITCH-DETECTOR       | 3409-001183 | SA     |
| TA1001     | C-TA,CHIP             | 2404-001225 | SA     |
| TA1003     | C-TA,CHIP             | 2404-001225 | SA     |
| TA1100     | C-TA,CHIP             | 2404-001274 | SA     |
| TA1113     | C-TA,CHIP             | 2404-001394 | SA     |
| TA1150     | C-TA,CHIP             | 2404-001394 | SA     |
| TA1179     | C-TA,CHIP             | 2404-001394 | SA     |
| TA1201     | C-TA,CHIP             | 2404-001087 | SA     |
| TA1227     | C-TA,CHIP             | 2404-001268 | SA     |
| TA406      | C-TA,CHIP             | 2404-001366 | SA     |
| TA407      | C-TA,CHIP             | 2404-001366 | SA     |
| TA415      | C-TA,CHIP             | 2404-001366 | SA     |
| TA417      | C-TA,CHIP             | 2404-001366 | SA     |
| TA439      | C-TA,CHIP             | 2404-001333 | SA     |
| TA440      | C-TA,CHIP             | 2404-001333 | SA     |
| TA529      | C-TA,CHIP             | 2404-001274 | SA     |
| TA532      | C-TA,CHIP             | 2404-001366 | SA     |



## Electrical Parts List

| Design LOC | Description         | SEC CODE    | STATUS |
|------------|---------------------|-------------|--------|
| TA535      | C-TA,CHIP           | 2404-001366 | SA     |
| TA706      | C-TA,CHIP           | 2404-001394 | SA     |
| TA716      | C-TA,CHIP           | 2404-001164 | SA     |
| TA900      | C-TA,CHIP           | 2404-001394 | SA     |
| TAC700     | SWITCH-TACT         | 3404-001152 | SA     |
| TCX1001    | OSCILLATOR-VCTCXO   | 2809-001277 | SA     |
| TH800      | THERMISTOR-NTC      | 1404-001165 | SA     |
| TR1000     | TR-SMALL SIGNAL     | 0501-000225 | SA     |
| TR1000     | TR-ARRAY            | 0506-001004 | SA     |
| TR1001     | TR-SMALL SIGNAL     | 0501-000225 | SA     |
| TR1001     | FET-SILICON         | 0505-001670 | SA     |
| TR1002     | TR-SMALL SIGNAL     | 0501-000225 | SA     |
| TR1100     | TR-DIGITAL          | 0504-001176 | SA     |
| TR1101     | TR-DIGITAL          | 0504-001176 | SA     |
| TR1200     | TR-DIGITAL          | 0504-001113 | SA     |
| TR1201     | TR-DIGITAL          | 0504-001140 | SA     |
| TR1202     | TR-DIGITAL          | 0504-001140 | SA     |
| TR400      | FET-SILICON         | 0505-001376 | SA     |
| TR401      | FET-SILICON         | 0505-001376 | SA     |
| TR402      | FET-SILICON         | 0505-001462 | SA     |
| TR700      | FET-SILICON         | 0505-001802 | SA     |
| TR701      | FET-SILICON         | 0505-001469 | SA     |
| TR702      | TR-SMALL SIGNAL     | 0501-000225 | SA     |
| TR900      | FET-SILICON         | 0505-001165 | SA     |
| TR901      | FET-GAAS            | 0505-001217 | SA     |
| TR902      | TR-DIGITAL          | 0504-001113 | SA     |
| TR903      | TR-DIGITAL          | 0504-001113 | SA     |
| U1000      | IC-DC/DC CONVERTER  | 1203-002740 | SA     |
| U1000      | IC-RECEIVER         | 1205-002721 | SA     |
| U1001      | IC-DC/DC CONVERTER  | 1203-003328 | SA     |
| U1001      | IC-RECEIVER         | 1205-002265 | SA     |
| U1002      | IC-ANALOG MULTIPLEX | 1001-001215 | SA     |
| U1003      | IC-ANALOG MULTIPLEX | 1001-001215 | SA     |
| U1102      | IC-TRANSCEIVER      | 1205-002451 | SA     |
| U1200      | IC-ANALOG SWITCH    | 1001-001271 | SA     |
| U1201      | IC-RF SWITCH        | 1001-001270 | SA     |
| U1202      | IC-ANALOG SWITCH    | 1001-001262 | SA     |
| U1203      | IC-CMOS LOGIC       | 0801-002970 | SA     |
| U1204      | IC-CMOS LOGIC       | 0801-002970 | SA     |
| U1205      | IC-CMOS LOGIC       | 0801-002970 | SA     |
| U1206      | IC-CMOS LOGIC       | 0801-002345 | SA     |
| U1207      | IC-DC/DC CONVERTER  | 1203-001788 | SA     |
| U200       | IC-CMOS LOGIC       | 0801-002628 | SA     |
| U202       | IC-CMOS LOGIC       | 0801-002644 | SA     |
| U203       | IC-CMOS LOGIC       | 0801-002970 | SA     |
| U302       | IC-CMOS LOGIC       | 0801-002237 | SA     |
| U303       | IC-CMOS LOGIC       | 0801-002529 | SA     |
| U304       | IC-CMOS LOGIC       | 0801-002628 | SA     |
| U306       | IC-CMOS LOGIC       | 0801-002628 | SA     |
| U307       | IC-CMOS LOGIC       | 0801-002628 | SA     |

| Design LOC | Description         | SEC CODE    | STATUS |
|------------|---------------------|-------------|--------|
| U400       | IC-VOL. DETECTOR    | 1203-002832 | SA     |
| U401       | IC-CMOS LOGIC       | 0801-002529 | SA     |
| U402       | IC-CMOS LOGIC       | 0801-002970 | SA     |
| U403       | IC-RESET            | 1203-002895 | SA     |
| U404       | IC-CMOS LOGIC       | 0801-002970 | SA     |
| U405       | IC-DC/DC CONVERTER  | 1203-003500 | SA     |
| U406       | IC-VOL. DETECTOR    | 1203-002617 | SA     |
| U407       | IC-DC/DC CONVERTER  | 1203-001702 | SA     |
| U408       | IC-VOL. DETECTOR    | 1203-002250 | SA     |
| U409       | IC-CMOS LOGIC       | 0801-002529 | SA     |
| U410       | IC-POSI.FIXED REG.  | 1203-003973 | SA     |
| U411       | IC-MULTI REG.       | 1203-003322 | SA     |
| U412       | IC-MULTI REG.       | 1203-003322 | SA     |
| U413       | IC-MULTI REG.       | 1203-002965 | SA     |
| U414       | IC-POSI.FIXED REG.  | 1203-003878 | SA     |
| U415       | IC-HALL EFFECT S/W  | 1009-001010 | SA     |
| U416       | IC-MULTI REG.       | 1203-002862 | SA     |
| U501       | IC-ANALOG SWITCH    | 1001-001261 | SA     |
| U502       | IC-ANALOG SWITCH    | 1001-001261 | SA     |
| U503       | IC-ANALOG SWITCH    | 1001-001261 | SA     |
| U504       | IC-ANALOG SWITCH    | 1001-001261 | SA     |
| U505       | IC-AUDIO AMP        | 1201-002233 | SA     |
| U506       | IC-AUDIO AMP        | 1201-002233 | SA     |
| U507       | IC-ANALOG MULTIPLEX | 1001-001152 | SA     |
| U508       | IC-VOLTAGE COMP.    | 1202-001022 | SA     |
| U601       | IC-ANALOG SWITCH    | 1001-001261 | SA     |
| U602       | IC-CMOS LOGIC       | 0801-002970 | SA     |
| U603       | IC-CMOS LOGIC       | 0801-002970 | SA     |
| U604       | IC-ANALOG SWITCH    | 1001-001209 | SA     |
| U605       | IC-VOL. DETECTOR    | 1203-002716 | SA     |
| U606       | IC-CMOS LOGIC       | 0801-002970 | SA     |
| U700       | IC-OP AMP           | 1201-001999 | SA     |
| U702       | IC-ANALOG SWITCH    | 1001-001145 | SA     |
| U803       | IC-CMOS LOGIC       | 0801-002970 | SA     |
| U900       | IC-POWER SUPERVISOR | 1203-003335 | SA     |
| U901       | IC-CMOS LOGIC       | 0801-002970 | SA     |
| U902       | IC-CMOS LOGIC       | 0801-002345 | SA     |
| UCD500     | IC-CODEC            | 1205-002321 | SA     |
| UCP201     | IC-MICROPROCESSOR   | 0902-001848 | SA     |
| UCP800     | IC-MODEM            | 1205-002521 | SA     |
| UME300     | IC-SRAM             | 1106-001489 | SA     |
| UME301     | IC-ETC. MEMORY      | 1109-001320 | SA     |
| UME305     | IC-DRAM             | 1105-001617 | SA     |
| UME802     | IC-MCP              | 1109-001293 | SA     |
| VCO1000    | OSCILLATOR-VCO      | 2806-001332 | SA     |
| VCO1100    | OSCILLATOR-VCO      | 2806-001333 | SA     |
| ZD1100     | DIODE-ZENER         | 0403-001387 | SA     |
| ZD601      | DIODE-TVS           | 0406-001167 | SA     |
| ZD602      | DIODE-TVS           | 0406-001167 | SA     |
| ZD603      | DIODE-TVS           | 0406-001200 | SA     |

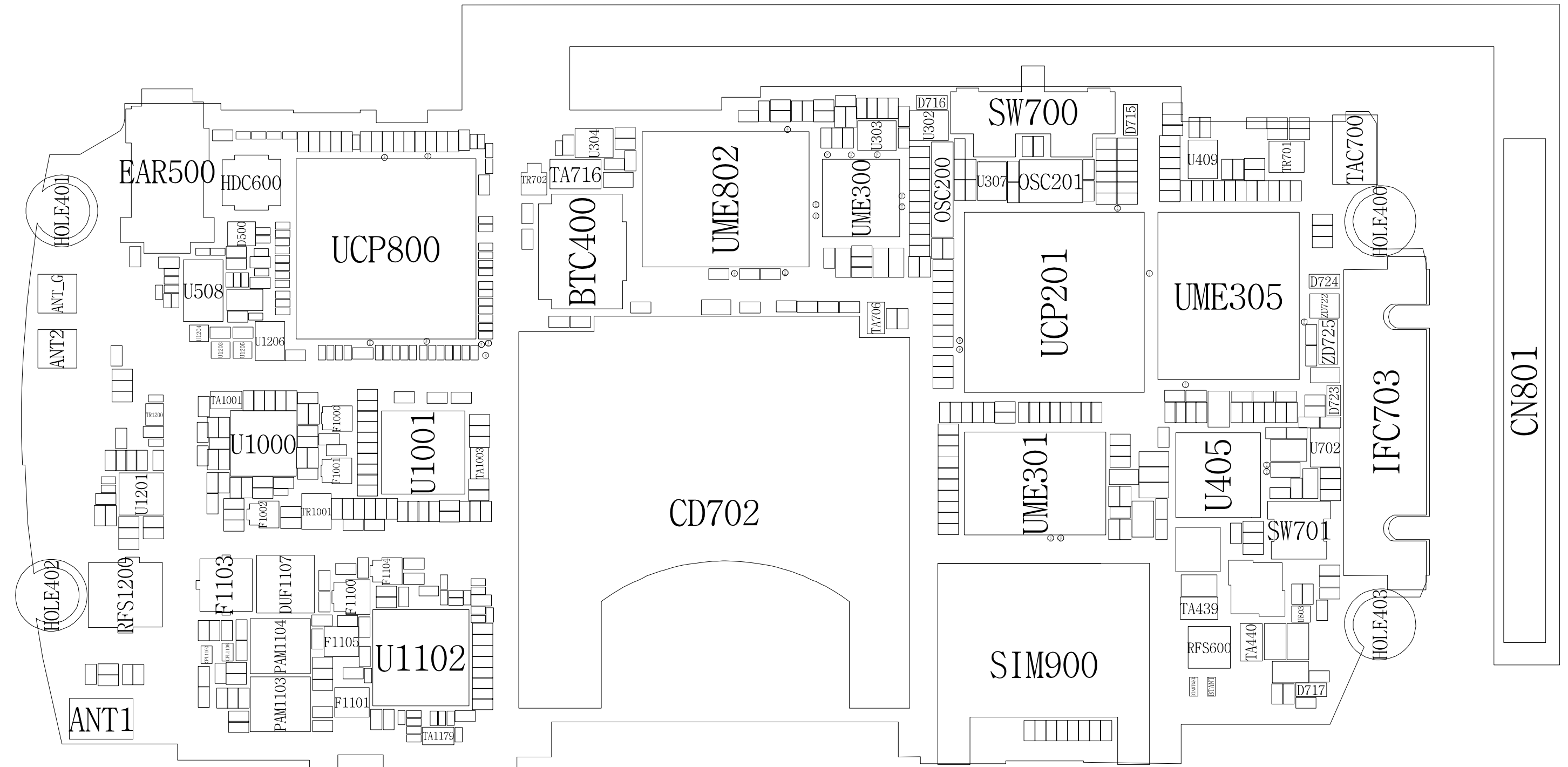
## Electrical Parts List

---

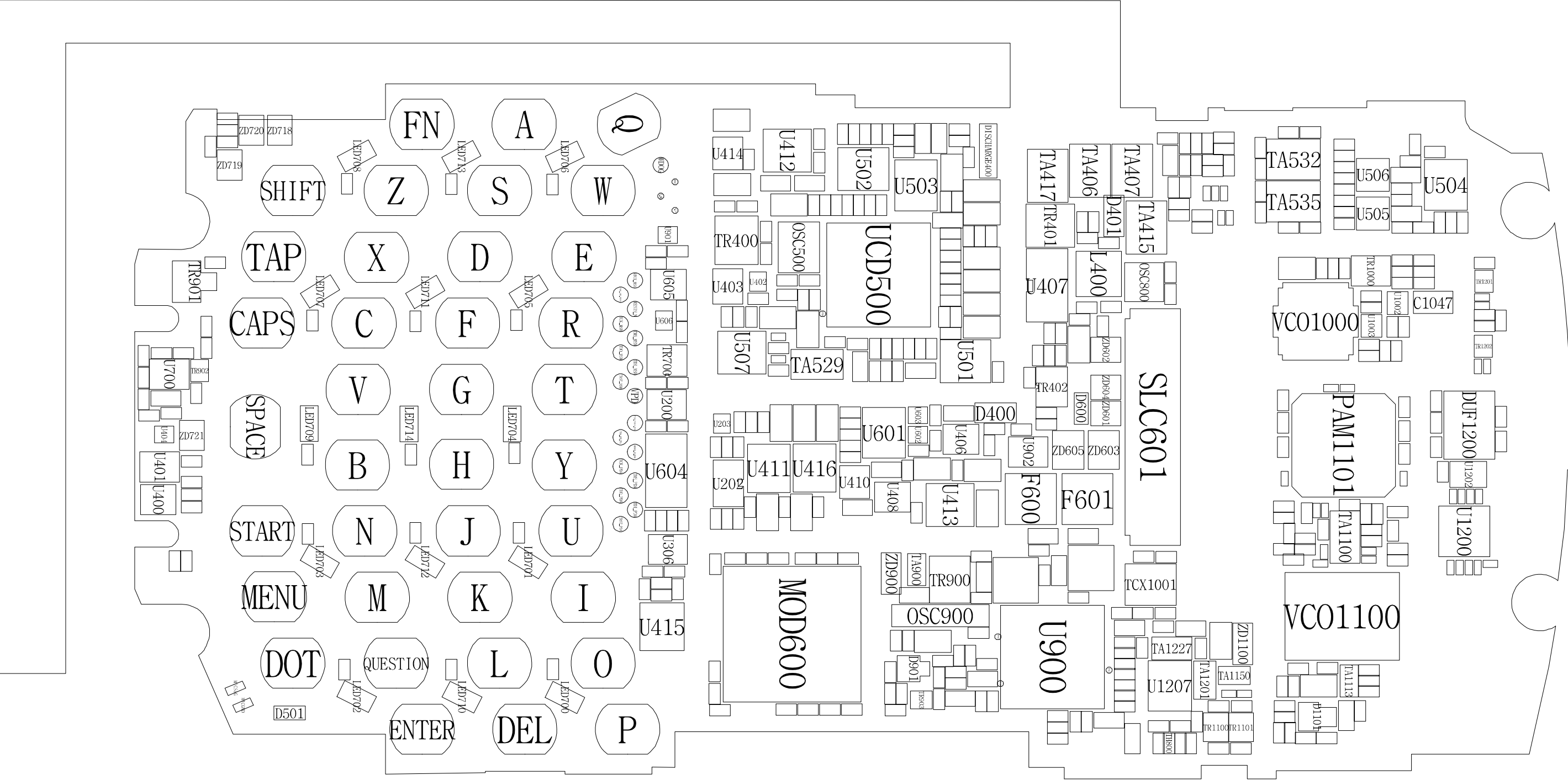
| Design LOC | Description | SEC CODE    | STATUS |
|------------|-------------|-------------|--------|
| ZD604      | DIODE-TVS   | 0406-001167 | SA     |
| ZD605      | DIODE-TVS   | 0406-001200 | SA     |
| ZD718      | DIODE-TVS   | 0406-001167 | SA     |
| ZD719      | DIODE-TVS   | 0406-001167 | SA     |
| ZD720      | DIODE-TVS   | 0406-001167 | SA     |
| ZD721      | DIODE-TVS   | 0406-001167 | SA     |
| ZD722      | DIODE-TVS   | 0406-001167 | SA     |
| ZD725      | DIODE-ZENER | 0403-001547 | SA     |
| ZD900      | DIODE-ZENER | 0403-001387 | SA     |

## 11. PCB Diagrams

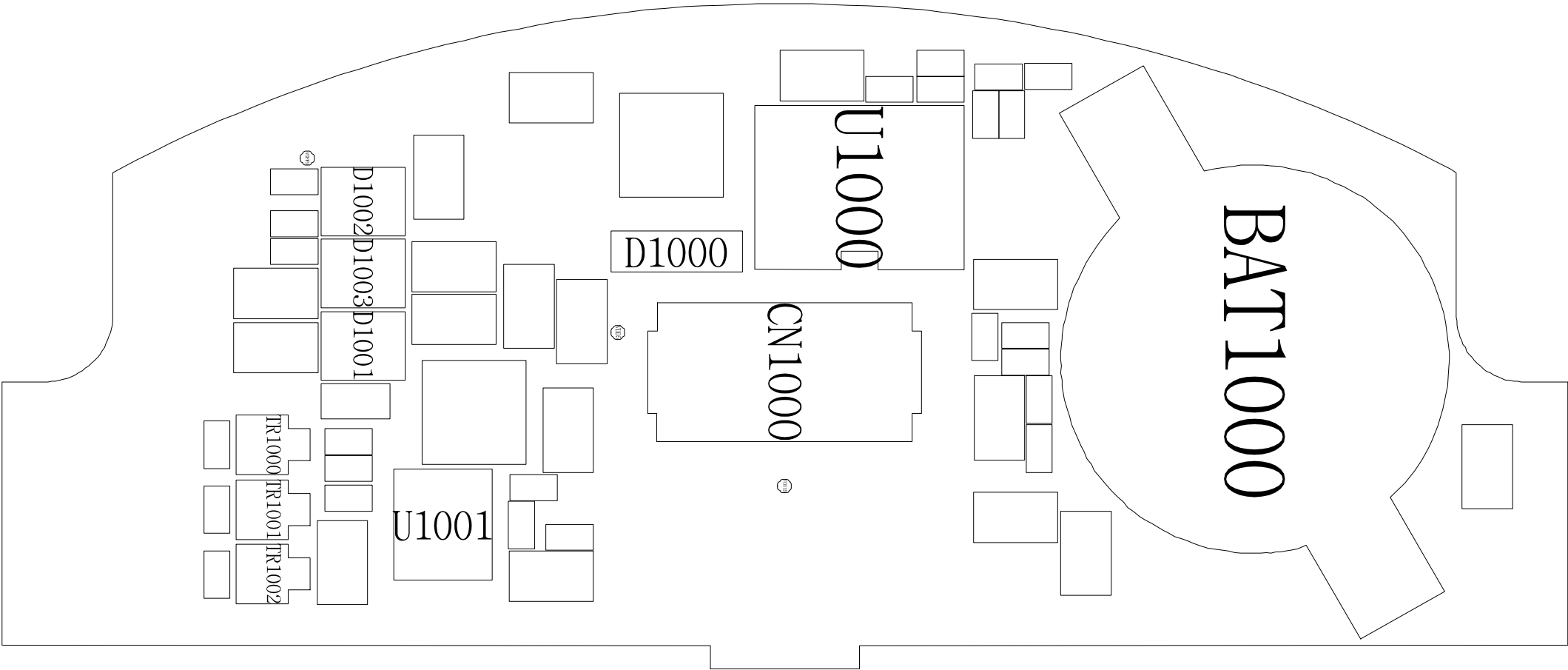
## 11-1. Main PCB Top Diagram



11-2. Main PCB Bottom Diagram



11-3. SUB PCB Top Diagram



#### 11-4. SUB PCB Bottom Diagram

